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Mid Tarn Farm
Sellafield
Cumbria

AVISON YOUNG

Update Ecological Constraints Study; 2023

Final

VERSION 2

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Contents

1. Introduction

BiOME Consulting Ltd was commissioned in June 2023 by Avison Young to undertake an update Preliminary Ecological Appraisal (PEA) and nocturnal bat survey in relation to the demolition of a number of barns/sheds and a farmhouse at Mid Tarn Farm (**Figure 1**) (the '*site*').

Previous ecological surveys have been completed in relation to this site in 2021[1] and 2022[2]. Works have been delayed and due to the amount of time that has elapsed since the completion of these surveys, and in line with relevant guidelines[3], an update PEA/Ecological Constraints Study (ECS) was deemed necessary to inform the proposed works.

This report details the methods employed, results obtained and recommendations to enable the lawful progression of the project from an ecological perspective.

1 BiOME Consulting Ltd (2021). *Mid Tarn Farm, Sellafield, Cumbria; Preliminary Ecological Appraisal*

2 BiOME Consulting Ltd (2022). *Mid Tarn Farm, Sellafield, Cumbria; Update Preliminary Ecological Appraisal Report*

3 CIEEM (2019). *Advice Note on the Lifespan of Ecological Reports & Surveys*

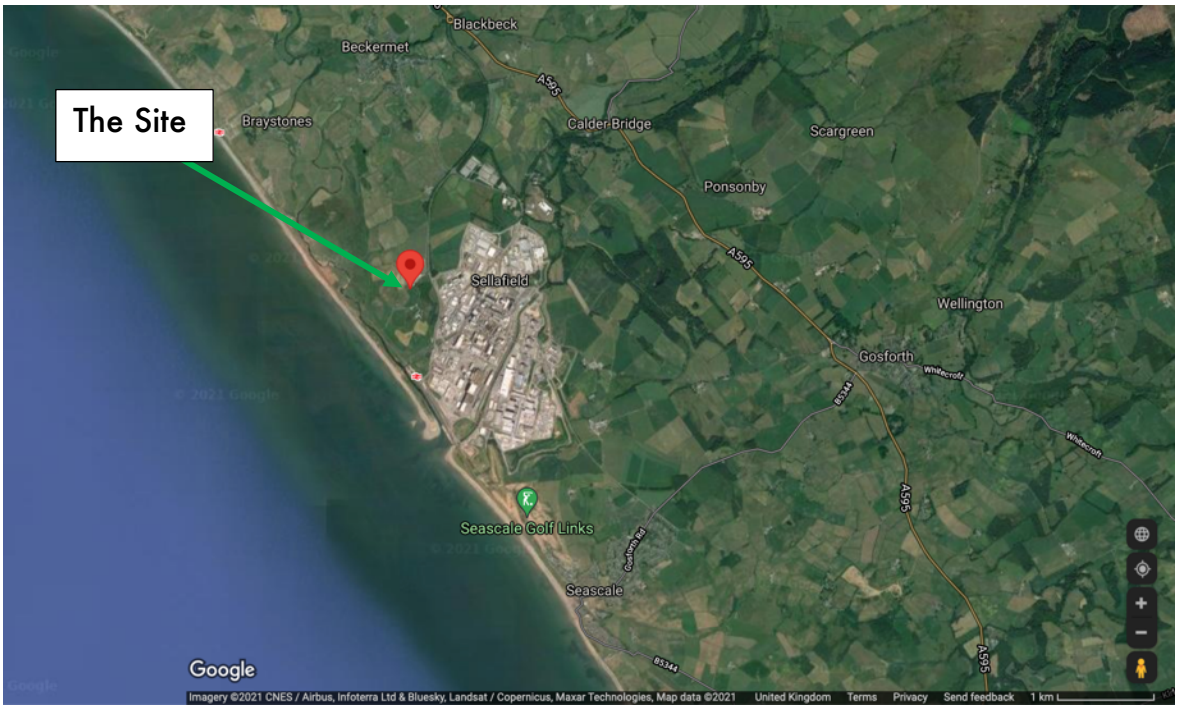
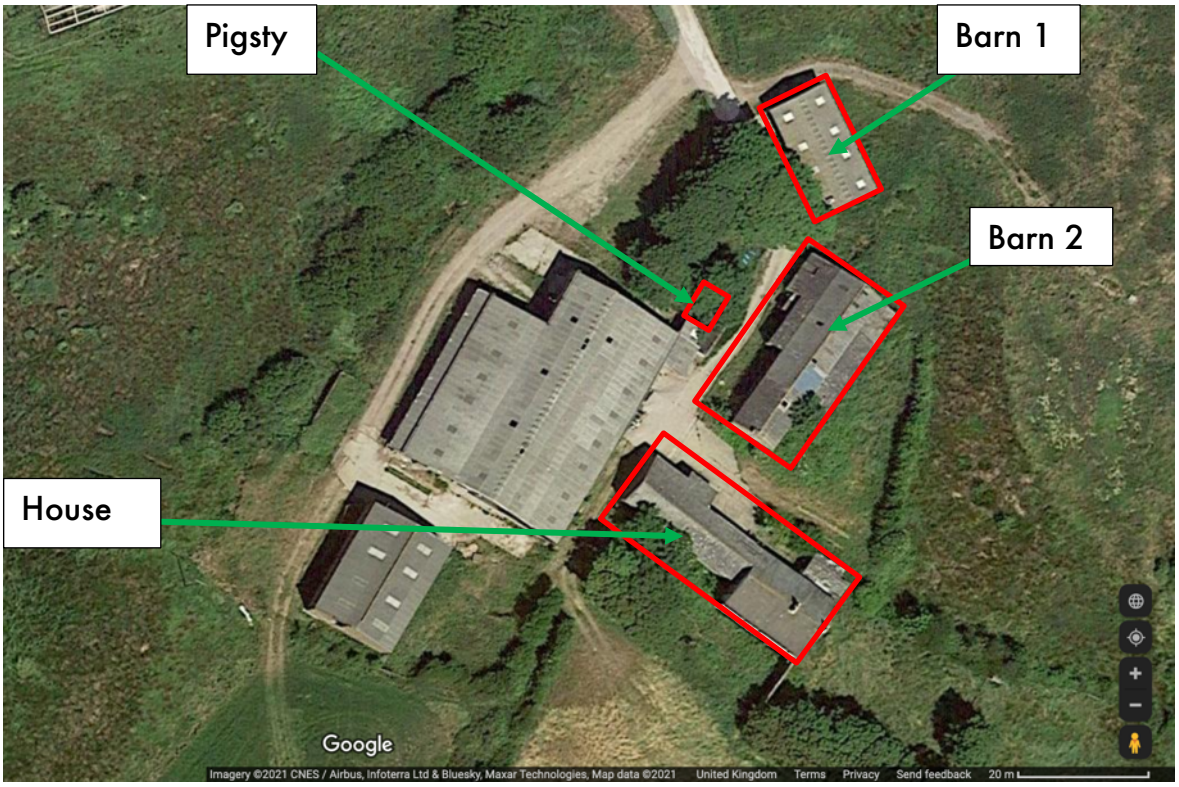

The Site
Blackbeck
Beckermet
Braystones
Calder Bridge
Scargreen
Ponsonby
Sellafield
Wellington
Gosforth
Seascale Golf Links
Seascale
A595
Google
Imagery ©2021 CNES / Airbus, Infoterra Ltd & Bluesky, Landsat / Copernicus, Maxar Technologies, Map data ©2021 United Kingdom Terms Privacy Send feedback 1 km

Figure 2. Site layout, buildings to be demolished in red



1.1. Development Proposal

It is proposed to demolish the House, Pigsty, Barn 1, and Barn 2 (**Figure 2**)

2. Methodologies

2.1. Preliminary Ecological Appraisal Survey

A update PEA survey[4],[5] was undertaken on 26 July 2023 by an experienced ecologist, Martyn Owen MCIEEM, in excellent weather conditions. Martyn holds survey licenses in relation to GCN (2016-19752-CLS-CLS), bats (2022-10620-CL18-BAT) and a variety of Schedule 1 birds (including Barn Owl *Tyto alba*). During the survey all areas within the site and site boundaries were walked and habitat types assessed. Signs of protected species, invasive plants (*i*.e. those included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)) and other notable species were also searched for during the survey, as well as noting habitats considered to have the potential to support protected species.

2.2. Bats

2.2.1. Preliminary Roost Assessment

A update Preliminary Roost Assessment (PRA) survey[6] was undertaken concurrently with the PEA by Martyn Owen MCIEEM. This survey was completed in suitable weather conditions (overcast and dry). Prior to the completion of the site survey, aerial imagery was reviewed[7].

The survey involved an inspection of the interior (where accessible) and exterior of the buildings to identify potential or actual bat access points and roosting sites, and to locate any evidence of bats such as live or dead specimens, bat droppings, urine splashes, fur-oil staining and/or squeaking/scratching noises. It should be noted that sometimes bats leave no visible sign of their presence on the outside of a building (and even when they do wet weather can wash away evidence).

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4 Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London

5 CIEEM (2017) *Guidelines for preliminary ecological appraisal* [online] available at: https://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea- (accessed 25 July 2023)

6 Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn.). The Bat Conservation Trust, London

7 Google Maps [online] available at: https://www.google.co.uk/maps (accessed 25 July 2023)

The inspection was facilitated by the use of ladders, binoculars, a high-powered torch, endoscope and small dental mirrors to inspect accessible crevices with the potential to support bats.

The potential suitability of the survey area for roosting bats was assessed in line with relevant guidelines[6] and allocated to one of the categories detailed within **Table 1**.

Table 1. Guidelines for assessing the potential suitability of proposed development sites for bats

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure/tree 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).
Moderate	A structure/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).
High	A structure/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.
Confirmed Roost	Definitive evidence of roosting bats present.

2.2.2. Emergence/Re-entry Surveys

One update nocturnal survey of the House, Barn 2 and the Pigsty was completed (**Table 2**).

To ensure coverage of all areas which could support bats the nocturnal surveys of the Pigsty/Barn 2 were completed by five surveyors and surveys of the House

were also completed by five surveyors (**Table 2**) (Martyn Owen (NE bat licence no. 2022-10620-CL18-BAT), Richard Moores MCIEEM (NE bat licence no. 2015-12257-CLS-CLS), Samuel Dreux QCIEEM, Laura Owen and Steve Forrester) all of which are highly experienced nocturnal bat surveyors.

Surveyors were equipped with electronic bat detectors (EM Touch Pro 2) and sound files were analysed with appropriate bat analysis software (Kaleidoscope) once the surveys were completed. InfraRed cameras were also used, covering all elevations and the footage reviewed at the conclusion of the surveys.

The nocturnal bat surveys were undertaken in weather conditions considered appropriate for surveys of this kind (**Table 2**).

Table 2. Survey details

Date	Surveyors	Sunset/ rise	Time		Cloud (octets)	Wind (Beaufort/ Direction)	Temp (°C)	Precip.
			Start	Finish				
Pigsty/Barn 2								
26/07/23	MO/SF/ RM/SD/LO	05:15	03:25	05:30	8	2 SE	13	Nil
House								
27/07/23	MO/SF/ RM/SD/LO	21:23	21:17	23:05	8	1 W	14	Nil

2.3. Limitations

The findings presented in this study represent those at the time of survey and reporting, and data collected from available sources. Ecological surveys are limited by factors which affect the presence of plants and animals, such as the time of year, migration patterns and behaviour.

Access to all areas outwith the site boundary was not possible; however, it was possible to adequately assess these areas from within the site or from public rights of way.

Access to the interior of the on-site buildings, excluding Barn 1 and the Pigsty, was not possible due to health and safety concerns. However, external inspections and

nocturnal surveys were completed. This is not therefore considered a significant constraint and does not affect the validity of the conclusions of this report.

The inspection of buildings and built structures for evidence of bats can be conducted at all times of year. The daytime inspection was completed in the main period of bat activity (May-September inclusive) but it is possible that previous evidence of low-level bat usage may have not been apparent. However, the buildings were not in regular use and any bat evidence inside the buildings would very likely have been visible to the surveyor, if present.

3. Results

3.1. Update PEA

The updated PEA conducted on 7 September 2022 did not suggest any significant changes to the observations made during the previous PEA conducted on 6 April 2021[8].

3.2. Bats – Update Emergence Surveys

A single Common Pipistrelle *Pipistrellus pipistrellus* exited a roost via a missing roof panel (**Photograph 1**).

Photograph 1. Roost access point

No bats roosted within the House or Pigsty.

8 Mid Tarn Farm, Sellafield, Cumbria (27 September 2021) Ecological Constraint Study, BiOME Consulting Ltd

Activity was low, with infrequent passes of Common Pipistrelle and Soprano Pipistrelle *Pipistrellus pygmaeus* along with four passes of Brown Long-eared Bat *Plecotus auritus*.

4. Conclusions and Required Actions

4.1. Designated Sites

Nine non-statutorily designated sites are present within 2km of the site. Taking into account the nature of the proposed works, no effects to these locally designated sites are predicted, assuming all works strictly follow pollution prevention best practice.

4.2. Bats

4.2.1. Buildings

4.2.1.1. Farmhouse, Pigsty and Barn 1

No evidence of roosting bats was identified within the Farmhouse, Pigsty or Barn 1 during the surveys and bat activity in the general area was relatively low. No further survey work is required prior to demolition works.

In the apparently unlikely event that bats are encountered during the works to these buildings, all works must cease and the advice of a Suitably Qualified Ecologist (SQE) obtained.

4.2.1.2. Barn 2

Table 3 summarises the results of the bat surveys. The likely roost type based on all surveys completed is included below, along with an assessment of roost value[9].

Table 3. Bat survey results summary

Roost Access Points	Species	Maximum Number Recorded Roosting	Likely Roost Type (Maximum Value)	Roost Value	Impacted by Development?
1	Common Pipistrelle	1	Day Roost	Local	Yes

The specific roost site of the bat detailed within **Table 3** could not be determined.

9 Wray, S., Wells, D., Long, E., Mitchell-Jones, T., (2010). *Valuing Bats in Ecological Impact Assessment.*

Impacts

The proposed works will result in the loss of the roost.

Natural England Licencing

The confirmation of a roosting bat within Barn 2 means that a licence from Natural England will be required to enable the proposed works to proceed lawfully. Given the identified roost is of low conservation status, the site can be registered under the Bat Mitigation Class Licence (BMCL) scheme through a Registered Consultant (RC). Following submission of appropriate forms, the application takes up to ten working days to be assessed by Natural England.

Any works that could destroy/modify a bat roost/access point or disturb[10] roosting bat/s will require a Natural England licence to enable the works to be completed legally.

Timing of Works

There are no restrictions with regards to when (e.g. certain months of the year) works can take place, although it would be best practice to avoid low winter temperatures when bats may be in torpor (pipistrelles can use the same roosts year-round). A BMCL can only be obtained a maximum of four months prior to the start of works to the area of the roost and the licence covers a maximum timeframe of six months (i.e. works to destroy/modify the roost must be completed in six months, NOT that the project must be completed within this six-month window). All permissions are required to have been obtained before the site can be registered under the BMCL scheme.

To inform the BMCL application surveys must have been completed during the most recent bat active season. Consequently, if works do not occur before May 2024 at least one update survey will be required.

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10 Disturbance of animals in this context includes in particular any disturbance which is likely– (a) to impair their ability (i) to survive, to breed or reproduce, or to rear or nurture their young; or (ii) in the case of animals of hibernating or migratory species, to hibernate or migrate; or (b) to affect significantly the local distribution or abundance of the species to which they belong.

Supervision of Works

Prior to demolition, when safe access to the interior is achievable, survey of the interior will be needed to try and ascertain the roost location.

Works in the area of the roost (or potential roost sites if the specific location cannot be ascertained) will need to be supervised by an RC (or accredited agent). Prior to works commencing, the RC would provide a 'toolbox talk' to those contractors on site in which details of e.g. best working practices and what to do in the event of discovering a bat would be discussed.

During supervised works to the area of the roost the RC would capture any bats that do not fly away and move them to a temporary bat box (erected on a nearby tree/structure prior to works commencing).

These works (when capture/handling and exclusion of bats is possible) should ideally take place in conditions suitable for bats to be active (spring-autumn inclusive). However, works can also be undertaken in the winter as long as weather conditions allow (sunset temperature of at least 8°C on preceding 2+ days).

Compensation

Although there is no requirement for any compensatory roosting features to be installed under the BMCL scheme (favourable conservation status is maintained without any compensation), it is recommended that two Schwegler 2F[11] bat boxes with double front panels are installed on trees around the periphery of the site.

4.2.2. Trees

No further survey work in relation to the on-site trees is required. However, in the unlikely event that bats are disturbed during site works, works must cease and the advice of a SQE sought.

11 https://www.nhbs.com/2f-schwegler-bat-box-with-double-front-panel

4.3. Habitats and Other Species

None of the **habitats** identified on-site were considered to be of significant ecological value and are not considered to represent a constraint to the proposed works.

Retained trees on/near site should be protected in line with BS 5837:2012[12]. Where vegetation clearance is required, vegetation should be reinstated on at least a like-for-like basis. Standard pollution control measures should be implemented during construction to protect all habitats.

As some very limited vegetation clearance is likely to be required on site, the works have the potential to cause disturbance, killing and injury of **reptiles** (and/or common amphibians). Further surveys are not necessary given the scale of habitat affected, but careful vegetation clearance to temporarily displace animals should be implemented.

Vegetation clearance should be undertaken over winter (November-February). Alternatively, if carried out outside of this period, a two-stage clearance should be implemented, subject to an ecological watching brief, with vegetation cut to 150 mm and then to ground level.

No **Badger** setts were present within the site or adjacent accessible areas. Nevertheless, the occasional presence of foraging Badgers is considered possible; it would therefore be prudent to consider Badgers during renovation works, this may include (if relevant):

- covering trenches at the conclusion of each working day, or include a means of escape for any animal falling into excavations, and
- any temporarily exposed open pipe system should be capped in such a way as to prevent Badgers gaining access.

The potential presence of breeding **Barn Owl** within the site has been identified, although no internal access to buildings where probable evidence was identified

12 British Standards Institute BS 5837:2012. Trees in relation to design, demolition and construction.

was possible. However, no Barn Owl were observed during nocturnal bat surveys and it is therefore considered highly unlikely that this species nested within the site during the survey period. The internal inspection of the Barn 2 and the House will be required prior to demolition works.

If possible, any vegetation clearance/building works should be completed outside the **nesting bird** season (1 March to 31 August), although it should be noted that the nesting period may extend beyond these dates (for example, pigeons can breed in any month of the year in the UK). Should an occupied bird nest or a nest in the process of being constructed be encountered during works, clearance must cease in this area and should only re-commence once the birds have fledged or the nest is abandoned.

If works must be undertaken during the nesting season, a survey to identify any nests which may be impacted will be required. This survey should be undertaken by a SQE. Again, should an occupied nest or nest under construction be found, works must cease in this area until the birds have fledged or the nest has been abandoned.

Japanese Knotweed *Reynoutria japonica* is present along the access track, at the location shown on **Figure 3**. An invasive plant species management plan should be included within the contractor's risk assessment method statement document, containing site-specific methods to ensure that all site activities are controlled and are in accordance with best practice procedures if works are within 7 m of invasive species.

Remediation of the identified stand of Japanese Knotweed by a specialist contractor should be completed.

Figure 3. Location of Japanese Knotweed

4.4. General Mitigation

No further works in relation to other species are considered necessary at this time.

All works should be undertaken in accordance with *Guidance for Pollution Prevention (GPP5) and PPG1 Understanding your Environmental Responsibilities*.

If any protected species are encountered during the works, all works in the vicinity should stop immediately and a SQE contacted for advice on how to proceed.

4.5. Opportunities for Enhancement

The National Planning Policy Framework (NPPF) sets out national planning policies for the protection of biodiversity (and geological) conservation through the planning system. A key principle of NPPF is that, '*Opportunities to incorporate biodiversity in and around developments should be encouraged*'. Taking the

requirements of NPPF into account, opportunities should be sought where possible for nature conservation enhancement at this site, potentially including:

- The creation of habitat areas through landscape planting using native, locally sourced plants/trees.
- The planting of native fruiting species to provide a food source for invertebrates, birds and mammals.
- The installation of bird and bat boxes on retained tree/s. S41 priority species such as the House Sparrow (which were noted in the area) and Barn Owl *Tyto alba* could potentially benefit from the provision of appropriate boxes.
- Pond creation.

Such measures would be beneficial to nature conservation and show compliance with the latest policy guidance. It would be prudent to include details of enhancements within an Ecological Enhancement Plan.

4.6. Report Validity

The findings of this report are considered valid until 1 May 2024 from the date of this report[13]. If the works are delayed beyond this period, update survey/s will be required.

13 CIEEM (2019). *Advice Note on The Lifespan of Ecological Reports and Surveys* [online] available at: https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf