Barn at Fleming Hall Farm
Gosforth
Cumbria

Preliminary Ecological Appraisal

AVISON YOUNG

VERSION 2

Final

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Executive Summary

BiOME Consulting Ltd was commissioned by Avison Young in April 2022 to undertake a Preliminary Ecological Appraisal (PEA) of a barn located at Fleming Hall Farm, Gosforth, Cumbria which is to be demolished.

The PEA was completed in order to determine the baseline ecological conditions of the site, with particular attention given to the possible presence of protected, controlled or otherwise notable species. The ecological issues identified during the PEA were:

Bats: No evidence of the presence of roosting bats was encountered. Based on the results of the site survey and desk study it was assessed that all buildings and trees to be impacted offered negligible potential for roosting bats. In the apparently unlikely event that bats are encountered during works, all works must cease and the advice of a Suitably Qualified Ecologist (SQE) sought.

Nesting Birds: It was considered likely that birds nest within the site (within the building fabric and vegetation). The active nests of wild bird species (with certain exceptions) are legally protected from deliberate disturbance or destruction. Therefore, if re-development works are proposed for the bird nesting season (March-August inclusive), it will be necessary to appoint SQE to complete a check for active birds' nests. Should any active nests be found then it would be necessary to delay works until the nesting attempt has reached a natural conclusion. If works are planned for outside of the bird nesting period, then no such check is necessary.

Report Validity: The findings of this report are considered valid for up to 18 months from the date of this report. If the project is delayed beyond this period, an updated assessment of potential impacts will be required.

1. Introduction

BiOME Consulting Ltd. was commissioned by Avison Young in April 2022 to undertake a Preliminary Ecological Appraisal (PEA) of a barn located at Fleming Hall Farm (Grid Reference: NY 05034 03204), Gosforth, Cumbria (**Figure 1**).

The site survey and desk study were undertaken in order to establish the baseline ecological condition of the site, with particular attention given to the possible presence of protected or otherwise notable species. The results of the works completed have been used to identify potential constraints to development and recommend further ecological work required to enable the proposed works at both sites to proceed lawfully.

1.1. Site Description

Fleming Hall farm is situated between the village of Gosforth and Sellafield Nuclear Power Station (NPS) in western Cumbria (**Figure 1**).

Figure 1. Site location

Fleming Hall Farm comprises a farmhouse plus barns and associated outbuildings. Newmill Beck also runs east-west to the north of the farm complex (240m at its closest point), whilst a ca. 300m long belt of broadleaved trees runs up to the western edge of the farm complex. The farm is also a dairy farm and is largely surrounded by pastoral fields.

A variety of ecology surveys have been completed at the site in the recent past, focussing on renovations to the farmhouse and the demolition of a stone barn.

1.2. Proposed Works

It is proposed to demolish a barn, adjoining canopy to the west and small enclosed building attached to the southern side of the barn. The location of which is shown in **Figure 2**.

Figure 2. Fleming Hall Farm buildings layout

Photograph 1. Western elevation of barn, showing adjoining canopy

2. Relevant Legislation

Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The Habitats Regulations convey special protection to a number of species, which are listed in Schedule 2 of the Regulations and are referred to as European Protected Species (EPS). Those potentially relevant to the Project include:

- All UK resident bat species;
- Common (Hazel) Dormouse *Muscardinus avellanarius;*
- Great Crested Newt *Triturus cristatus* (GCN);
- Otter *Lutra Lutra;*
- Marsh Fritillary *Euphydryas aurinia*.

Regulation 43 makes it an offence to:

- Deliberately capture, injure or kill any wild animal of a EPS;
- Deliberately disturb wild animals of such a species;
- Deliberately take or destroy the eggs of such a species;
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance in the context of the offences above is disturbance which is likely to impair the ability of the animals to survive, to breed or reproduce, to nurture their young, to hibernate, to migrate; or to affect significantly the local distribution of the species.

Licences can be granted by the relevant Statutory Nature Conservation Organisation (SNCO) for developments (sometime referred to as EPS Licences or Derogation Licences) providing the purposes of the licence is for "preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment".

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) provides protection to both EPSs and other species including wild birds, Water Voles *Arvicola amphibius* and reptiles.

All wild birds, their nests and eggs are protected, with some rare species afforded extra protection from disturbance during the breeding season (these species are listed in Schedule 1 of the Act). It is illegal to take any wild bird or damage or destroy the nests and eggs of breeding birds. There are certain exceptions to this in respect of wildfowl, game birds and certain species that may cause damage.

In England and Wales Water Voles are listed on Schedule 5 of the Act, receiving full protection since 2008. The Wildlife and Countryside Act 1981 together with amending legislation, lists the following offences:

- Intentionally killing, injuring, or taking a Water Vole by any method.
- Intentionally or recklessly damaging or destroying a Water Vole place of shelter or protection.
- Intentionally or recklessly damaging disturbing a Water Vole whilst it is occupying such a structure or place it uses for shelter or protection.
- Intentionally or recklessly obstructing access to a Water Vole's place of shelter or protection.
- Selling, offering for sale, or possessing or transporting for the purposes of sale, any live or dead Water Vole, or any part or derivative, or advertising any of these for buying or selling.

All native reptile species in the UK are subject to partial protection from intentional or reckless killing or injury only.

The Act also includes provisions for the control of invasive non-native species (INNS). Under these provisions it is an offence to:

- Release or allow to escape into the wild any animal which is not ordinarily resident or a regular visitor to Great Britain or is included in Schedule 9 of the Act.

- Plant or otherwise cause to grow in the wild any plant which is included in Schedule 9 of the Act.

People undertaking works in proximity to invasive non-native plant species should take all reasonable steps and exercise all due diligence to avoid committing an offence.

The Invasive Alien Species (Enforcement and Permitting) Order 2019

The order came into effect on the 1 December 2019 to allow for enforcement of EU Regulations (Regulation (EU) No. 1143/2014 on the prevention and management of the introduction and spread of invasive alien species in England and Wales) also known as the IAS Regulations.

It lists 66 species which are of European Union concern. There are currently 19 species listed in the Order:

- Chinese Mitten Crab *Eriocheir sinensis*
- Red Swamp Crayfish *Procambarus clarkii*
- Crayfish Signal *Pacifastacus leniusculus*
- Spiny Cheek Crayfish *Orconectes limosus*
- Muntjac Deer *Muntiacus reevesi*
- Ruddy Duck *Oxyura jamaicensis*
- Egyptian Goose *Alopochen aegyptiacus*
- Grey Squirrel *Sciurus carolinensis*
- Himalayan *Balsam Impatiens glandulifera*
- Fanwort (otherwise known as Carolina Water Shield) *Cabomba caroliniana*
- Giant Hogweed *Heracleum mantegazzianum*
- Water Hyacinth *Eichhornia crassipes*
- Parrots Feather *Myriophyllum aquaticum*
- Floating Pennywort *Hydrocotyle ranunculoides*
- Floating Water Primrose *Ludwigia peploides*
- Water Primrose *Ludwigia grandiflora*
- Giant Rhubarb *Gunnera tinctoria*
- Curly Waterweed *Lagarosiphon major*
- Nuttall's Waterweed *Elodea nuttallii*

Natural Environment and Rural Communities (NERC) Act 2006

The UK Biodiversity Plan (BAP) was a programme designed to help conserve the UK's biodiversity. It led to the production of 436 action plans between 1995 and 1999 to help many of the UK's most threatened species and habitats to recover. A review of the UK BAP priority list in 2007 led to the identification of 1,150 species and 65 habitats that met the BAP criteria at UK level.

Currently 56 Habitats of Principal Importance and 943 Species of Principal Importance are included within Schedule 41 of the NERC Act 2006 and these include species and habitats which were identified in the UK BAP and which continue to be considered to represent the conservation priorities of England in the UK Post-2010 Biodiversity Framework.

National Planning Policy Framework (NPPF) 2021

The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

174 a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

174 b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

174 c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

174 d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

174 e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

174 f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

3. Methodologies

3.1. Desk Study

To inform previous works at the site, ecological records were obtained from Cumbria Biodiversity Data Centre (CBDC) on 16 March 2017. These records included information in relation to legally protected species within a 2km radius. Details of statutorily designated sites within 2km were obtained from the Magic[1] website. Although more than five years old, given the nature of the proposals, these data were considered valid to inform this project.

Habitats and Species of Principal Importance[2] and the Local Biodiversity Action Plan (LBAP) priority habitats and species were also reviewed to compare to those habitats and species either recorded within the site during the survey, or recorded as having potential to be present (either through habitat suitability or desk study records). The LBAP which covers this site is the Cumbria Biodiversity Action Plan[3].

3.2. Preliminary Ecological Appraisal Survey

A Preliminary Ecological Appraisal (PEA) survey[4],[5] was undertaken on 11 May 2022 by an experienced ecologist, Martyn Owen MCIEEM, in excellent weather conditions. During the survey all areas within the sites as well as the site boundaries were walked and habitat types assessed. Signs of protected species, invasive plants 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.

The ultimate purpose of this PEA was to identify potentially valuable habitats and plant species assemblages, and to identify the presence and/or potential for

1 http://www.magic.gov.uk/13/03/17 (accessed 1 May 2022)
2 Habitats and Species of Principal Importance are listed under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006.
3 Cumbria County Council (2016). Cumbria Biodiversity Action Plan [online] available at: http://www.cumbria.gov.uk/planning-environment/conservation/biodiversity/bio_bap.asp
4 Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London
5 Guidance on preliminary ecological appraisal (2013) CIEEM http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf

protected species. This report presents an initial assessment of the ecological significance of the features currently present at both sites, and the likelihood that the sites support legally protected species and/or species of conservation interest which may be affected by the proposed works.

Prior to the completion of the site surveys aerial imagery was reviewed[6] to provide an indication of previous and current site uses and habitat types present in the area.

3.3. Bats

3.3.1. Preliminary Ground Level Inspection/Preliminary Roost Assessment

Preliminary Ground Level Inspection (PGLI) surveys of all trees and Preliminary Roost Assessment (PRA) of all buildings to be impacted (directly or indirectly) was completed to determine their potential suitability for roosting bats. This assessment involved the detailed inspection of the exterior of each tree/building from ground level using binoculars and a high-powered torch to identify and illuminate features that may support roosting bats (Potential Roost Features (PRFs)).

The potential suitability of the trees/buildings to be impacted by the proposed development for roosting bats was assessed in line with relevant guidelines[7] and allocated to one of the categories detailed within **Table 1**.

6 Google Maps [online] available at: https://www.google.co.uk/maps (accessed 10 May 2022)
7 Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn.). The Bat Conservation Trust, London

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	Roosting bat/s or definitive evidence of roosting bats (*i.e.* accumulations of droppings) present.

3.4. 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.

4. Results

The results of the desk study (**Section 4.1** and **Section 4.2**) and the site survey (**Section 4.3**) are presented below.

4.1. Desk Study

4.1.1. Statutorily Designated Sites

There is one statutorily designated site within 2km, detail in relation to which are provided within **Table 2**.

Table 2. Designated site details

Site	Approx. distance from centre of sites	Description
Statutory Sites (within 2km)		
Lake District National Park	2km	The Lake District National Park encompasses a huge swathe of upland Cumbria incorporating upland land activities, communities and natural habitats.

4.1.2. Biological Records Data

Table 3 summarises the legally protected species records returned from CBDC.

Table 3. Biological records – legally protected species

Species	Number of Records (most recent record)	Conservation Status
Birds		
Sensitive species**	65(2013)	Schedule 1
Mammals		
Daubenton's Bat *Myotis daubentonii*	3(2011)	LBAP, EPS, Schedule 5
Noctule *Nyctalus noctula*	4 (2014)	LBAP, EPS, Schedule 5, S41
Pipistrellus bat sp. *Pipistrellus* spp	6 (2014)	EPS, Schedule 5
Common Pipistrelle *Pipistrellus pipistrellus sensu stricto*	3 (2016)	LBAP, EPS, Schedule 5
Soprano Pipistrelle *Pipistrellus pygmaeus*	10 (2009)	LBAP, EPS, Schedule 5, S41
Brown Long-eared Bat *Plecotus auritus*	1 (2011)	EPS, Schedule 5, S41
Red Squirrel *Sciurus vulgaris*	44 (2015)	LBAP, Schedule 5, S41
Badger *Meles meles*	6 (2013)	PBA 1992, Schedule 6
Polecat *Mustela putorius*	1 (2014)	LBAP, Schedule 4, S41

Species	Number of Records (most recent record)	Conservation Status
Reptiles & Amphibians		
Common Lizard *Zootoca vivipara*	3 (2009)	LBAP, Schedule 5, S41,
Slow Worm *Anguis fragilis*	4 (2011)	LBAP, Schedule 5, S41
Adder *Vipera berus*	12 (2015)	LBAP, Schedule 5, S41
Natterjack Toad *Epidalea calamita*	16 (2011)	LBAP, EPS, Schedule 5, S41, Schedule 2

Table Key

Schedule 1:	Fully protected through its inclusion in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).
Schedule 5:	Fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).
Schedule 6:	Protected through its inclusion on Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), which prohibits their killing or taking by certain methods.
S41:	Species of Principal under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
Schedule 2:	Species of importance under Schedule 2 of the Conservation (Natural Habitats & c) Regulations 2010
EPS:	European Protected Species.
PBA 1992:	Protected through the Protection of Badgers Act 1992
**	Recorded as 'Sensitive species' within the records search, no further details provided

The data search results confirm the historic presence of bats within the wider area including a roost of Common Pipistrelles at Newton Manor (NY04920395) where 89 bats were counted emerging in 2008. Daubenton's Bats were also recorded from Newton Wood in 2012 when 11 'passes' where made during one evening. Newton Manor is 710m north of Fleming Hall Farm, and 1.46km from Seascale Hall Farm.

A bat box scheme at Sellafield has recorded hibernating Noctule bats with further records of this species along the River Calder, Sellafield, as well as pipistrelle sp. (1-3) in bat boxes at Sellafield. In addition between 1-10 Soprano Pipistrelles have been noted using these bat boxes.

Red Squirrel has mainly been noted from Calder Fenwick's Wood but also at Newton Manor.

All Natterjack Toad records relate to the Sellafield Amphibian and Reptile Conservation Trust ponds that were created in response to the construction of Sellafield NPS to the west of the sites.

4.2. Site Survey

The barn and adjoining canopy were constructed with breezeblock, wood and metal with a cement-bound asbestos and metal roof on metal frames. The small building adjoining the south of the barn was brick-built and rendered with a sheet metal roof. The barn and adjoining canopy were in active use as a cow shed while the small adjoining building was used to store milk.

4.2.1. Habitats

The habitats found in the study area are common across England. No habitats that conform to LBAP or S41 priority habitats were identified.

4.2.2. Badger

The site is largely unsuitable for Badgers. All areas within the site were surveyed for Badgers, including adjacent boundaries and no setts or other evidence of Badgers was found and it is considered highly unlikely that Badgers would occur in areas to be impacted at any time.

4.2.3. Bats

The buildings to be impacted by the proposal were fully inspected and no evidence of bat use was encountered. The interior of barn was well illuminated due to roof panels and its open northern frontage (**Photograph 2**). No PRFs were present associated with the adjoining outbuilding.

The buildings to be impacted were assessed to be of **NEGLIGIBLE** potential value to roosting bats (**Table 1**).

A single semi-mature Sycamore *Acer pseudoplatanus* tree was present immediately adjacent to the north-western corner of the barn (**Photograph 3**). No PRFs were present on this tree, and it was assessed to be of **NEGLIGIBLE** potential value to roosting bats (**Table 1**).

Photograph 2. Northern façade or barn

Photograph 3. Sycamore tree

4.2.4. Other Section 41 Mammals

The site is considered unsuitable for any other Section 41 mammal species. The biological records search returned records of several species from the surrounding area, all of which prefer more open and natural habitats than the site provides.

4.2.5. Amphibians

The biological records search returned records of several species of amphibians, the most significant of which was Natterjack Toads, however their distribution is known to be restricted to a few small pools on the coast and the works will not impact upon them.

4.2.6. Reptiles

The desk study returned results of Common Lizard, Adder and Slow Worm but the habitats present on site are considered unsuitable for any reptile species. No further work is considered necessary in relation to this species group.

4.2.7. Birds

No evidence of Barn Owl use was found in the barn although Barn Owls are reported by the farmer to have bred within other barns at the site in the past.

Evidence of other species breeding within the barn was recorded including Swallow and House Sparrow.

4.2.8. Invertebrates

Taking into account the nature of the habitats on-site it is considered unlikely that significant populations of invertebrates are present.

4.2.9. Invasive Plants

No non-native invasive plants listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) were observed during the survey.

5. Conclusions and Recommendations

5.1. Statutory and non-statutory sites

Given the nature of the project and the distance to the nearest statutorily designated site, no adverse impacts upon are predicted as a consequence of the proposed works.

5.2. Habitats

None of the habitats identified on-site are thought to be of significant ecological value, and are not considered to represent a significant constraint to the future redevelopment of the site.

5.3. Bats

No evidence of the presence of roosting bats was encountered and it was assessed that all buildings/trees to be impacted offered negligible potential for roosting bats. In the apparently unlikely event that bats are encountered all works must cease and the advice of a Suitably Qualified Ecologist (SQE) sought.

5.4. Breeding Birds

It was considered likely that birds nest within the site (within the building fabric and vegetation). The active nests of wild bird species (with certain exceptions) are legally protected from deliberate disturbance or destruction. Therefore, if re-development works are proposed for the bird nesting season (March-August inclusive), it will be necessary to appoint SQE to complete a check for active birds' nests. Should any active nests be found then it would be necessary to delay works until the nesting attempt has reached a natural conclusion. If works are planned for outside of the bird nesting period, then no such check is necessary.

5.5. Other Species

Taking into account the results of the site walkover survey, the nature of the site and the results of the desk study, no further works in relation to other species are considered necessary at this time.

5.6. 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.

Opportunities may exist to create small habitat areas and to use native species in any landscape planting. Opportunities also exist to enhance the site for bird species through the incorporation of bat/bird boxes into built structures or on retained trees. Species of conservation concern (e.g. House Sparrow *Passer domesticus*) could potentially benefit from the provision of appropriate boxes. Such measures would therefore be beneficial to nature conservation and show compliance with the policy guidance.

5.7. Report Validity

The findings of this report are considered valid for up to 18 months from the date of this report[8]. If the project is delayed beyond this period, an updated assessment of potential impacts will be required.

8 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