



Pelham Walled Garden Cumbria

AVISON YOUNG

Update Bat Survey Report; 2023

Final

VERSION 2

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1. Introduction

BiOME Consulting Ltd was commissioned by Avison Young in 2019 to undertake Preliminary Ecological Appraisal (PEA)¹ in relation to the proposed removal and rebuild of the boundary wall (in sections) and removal of outbuildings located at Pelham Walled Garden, Cumbria (centred on National Grid Reference NY0371205540 (**Figure 1**)). The PEA identified the requirement for further assessment in relation to the potential presence of roosting bats in areas to impacted, which were completed in 2022².

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 guidelines³, 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.

Figure 1. Site Location



¹ BiOME Consulting (2019). *Pelham Walled Garden; Preliminary Ecological Appraisal*.

² BiOME Consulting (2022). *Pelham Walled Garden; Bat Survey Report; 2022*

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

1.1. Site Description

The site, located to the north of Sellafield Nuclear Power Station in western Cumbria (**Figure 1**), comprised the walled garden of Pelham House and includes allotments (**Photograph 1**) with associated buildings. The site layout is shown on **Figure 2**; the following buildings were present within the site:

- **Building 1**; a long, narrow building adjacent to the northern garden wall. It comprised seven component sections. One of these sections was a former boiler room with the remaining sections used for storage. This building was constructed of red brick and stone, with a single pitched concrete-asbestos sheet roof. A small roof void was present in the former boiler room.
- **Building 2**; constructed of red brick, again with a single pitched concrete-asbestos sheet roof. Within this building a small roof void was present.

The garden wall, which formed the perimeter of the allotments, was approximately 3m high constructed of red brick and stone with a single entrance point.

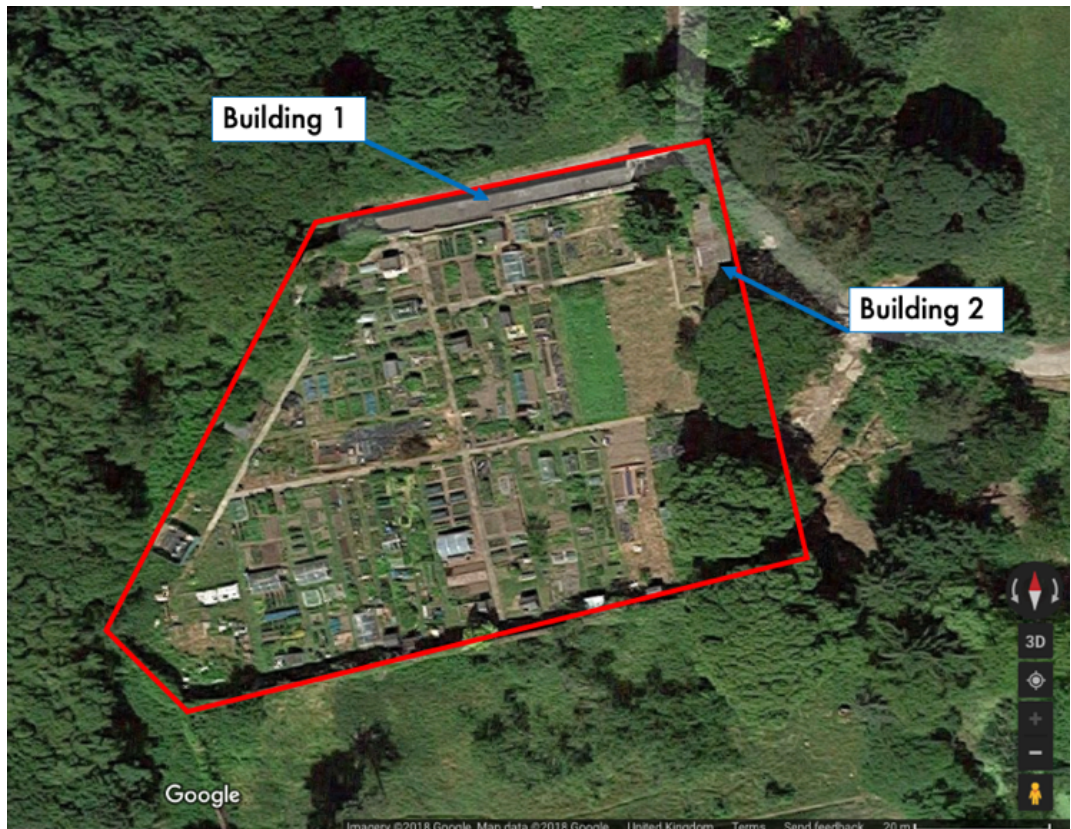
The site was accessed via a driveway to the east.

Habitats surrounding the site comprised mature deciduous woodland, arable farmland and semi-improved grassland and amenity grassland.

Photograph 1. The site



Figure 2. Site layout



2. Relevant Background Survey Data

2.1. Preliminary Ecological Appraisal - 2019

The 2019 PEA identified the following ecological issues of relevance to this report:

- Evidence of bat use (droppings) was identified within both onsite buildings, and the buildings were considered to possess 'moderate' potential to support roosting bats.
- The perimeter wall surrounding the site possessed features with the potential to support roosting bats and was assessed to be of 'low' suitability for roosting bats.

2.2. Bat Surveys 2022

2.2.1. Building 1 and Building 2

A nocturnal survey of these buildings did not identify the presence of roosting bats.

2.2.2. Wall

The PRA identified the presence of many, substantial PRFs and the presence of a roosting Soprano Pipistrelle *Pipistrellus pygmaeus* was confirmed during a single survey of a small section of wall.

3. Legislative Context

All British bat species are fully protected at national and European levels, through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended)⁴ and in Schedule 2 of the Conservation of Habitat and Species Regulations 2010⁵. Under this legislation, it is an offence to deliberately kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or resting place used for shelter or protection by a bat or disturb an animal while it is occupying a structure or place which it uses for that purpose.

Four species of bat, Greater Horseshoe Bat *Rhinolophus ferrumequinum*, Lesser Horseshoe Bat *R. hipposideros*, Bechstein's Bat *Myotis bechsteinii* and Western Barbastelle *Barbastella barbastellus*, are included on Annex II of the Habitats Directive⁶, which requires the designation of Special Areas of Conservation to ensure the maintenance of favourable conservation status (and these are therefore generally considered as perhaps the most important UK species). Seven bat species are listed as Section 41⁷ priority species; Barbastelle, Bechstein's Bat, Noctule *Nyctalus noctula*, Soprano Pipistrelle, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat and Lesser Horseshoe Bat.

4 The Wildlife and Countryside Act 1981 (as amended)

5 The Conservation of Habitats and Species Regulations 2010

6 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

7 Of the Natural Environment and Rural Communities Act 2006

4. Methodologies

4.1. Suitably Qualified Ecologist

The project was managed, and Preliminary Roost Assessment (PRA) completed, by Martyn Owen BSc (Hons) MCIEEM, NE bat licence no. 2022-10620-CL18-BAT.

Emergence/re-entry surveys were completed by Martyn Owen MCIEEM, Martyn Owen, Richard Moores MCIEEM (NE bat licence no. 2015-12257-CLS-CLS), Samuel Dreux QCIEEM, Rhys Owen, Laura Owen and Steve Forrester all of which are highly experienced nocturnal bat surveyors.

4.2. Update Preliminary Roost Assessment

An update Preliminary Roost Assessment (PRA) survey was completed of all buildings and the perimeter wall, in line with appropriate survey guidance⁸. Detailed endoscope inspection of all identified Potential Roost Features (PRFs) was also completed.

The survey involved an inspection of the interior and exterior of each building/perimeter wall to be impacted by the proposals 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 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).

The inspection was facilitated by the use of ladders, a high-powered torch, endoscope and small dental mirrors to inspect accessible PRFs

The potential suitability of the buildings/the wall for roosting bats was assessed in line with relevant guidelines² and allocated to one of the categories detailed within **Table 1**.

⁸ 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

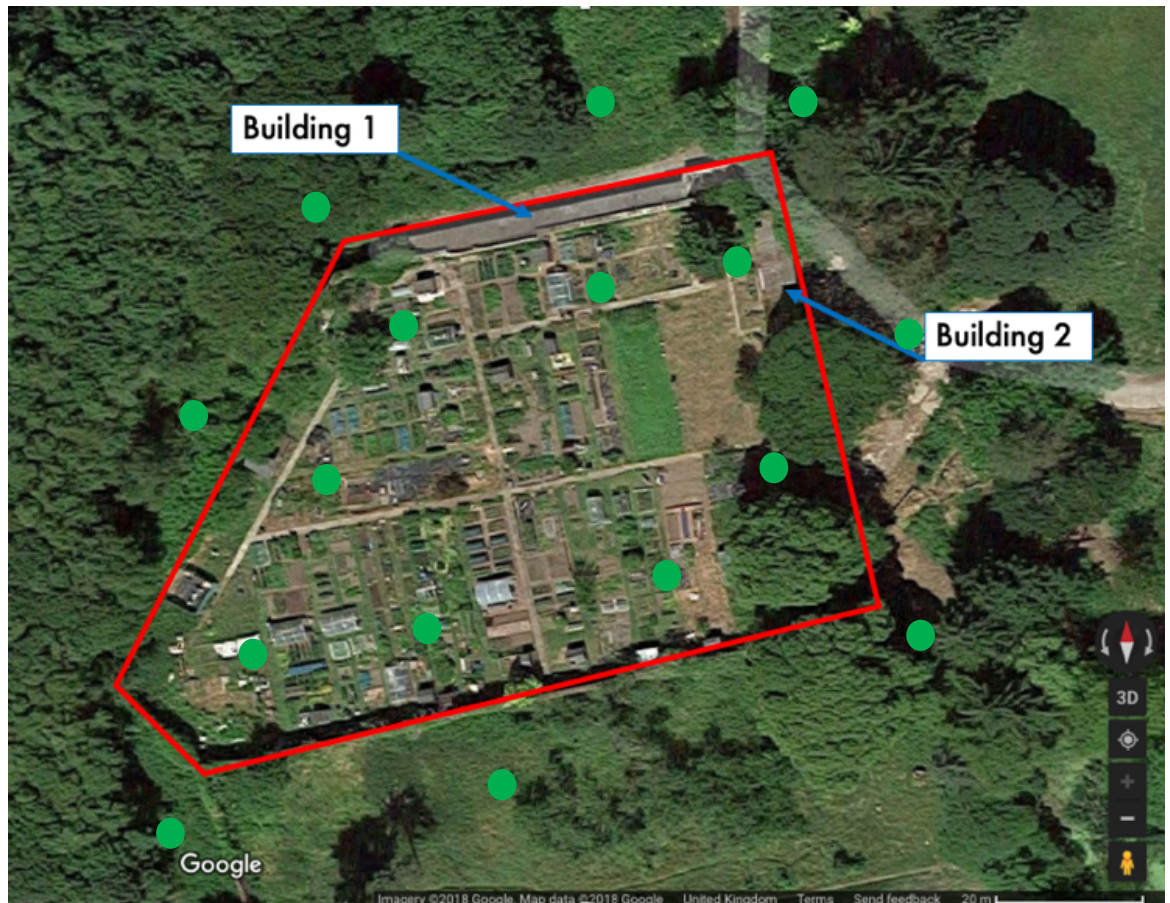
Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure/tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough 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	Definitive evidence of roosting bats, i.e. live animals or accumulation of droppings associated with potential roost features.

4.3. Emergence/Re-Entry Survey

Two nocturnal surveys of Building 1, Building 2 and the perimeter wall were undertaken.

To ensure coverage of areas which could support bats, each survey was completed over three survey sessions, with coverage achieved from 16 survey locations.

Figure 3. Surveyor locations (green dots)



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. Infra-red cameras (Canon XA60) and additional infrared lighting (Nightfox XB5 IR and flood lamps) were used, with cameras positioned to ensure that all areas with the potential to support roosting bats were covered. Following the survey, recorded footage was analysed.

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

Table 2. Nocturnal bat activity survey information

Date	Surveyors	Sunset/ rise	Time		Cloud (octets)	Wind (Beaufort/ Direction)	Min. Temp (°C)	Precip.
			Start	Finish				
Survey 1								
25/06/2023	MO, RO, LO, SD, SF, RM	21:53	21:38	22:53	7-8	0-1 W	14	Nil
26/06/2023	MO, RO, LO, SD, SF, RM	04:41	03:00	04:56	8	1-3 W	12	Nil
27/06/2023	MO, SD, SF, RM	21:53	21:38	23:50	8	2-3 W	15	Nil
Survey 2								
24/07/2023	MO, RO, LO, SD, SF, RM	21:28	21:13	23:38	1-2	1 NW	15	Nil
25/07/2023	MO, RO, LO, SD, SF, RM	05:11	03:20	05:25	1	0-1 NE	13	Nil
26/07/2023	MO, SD, SF, RM	21:24	21:09	23:24	8	2 SE	14	Nil

4.4. 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.

5. Results

5.1. Building 1

5.1.1. Preliminary Roost Assessment

The results of the PRA surveys were consistent with those in 2019 and 2022.

5.1.2. Nocturnal Survey

No bats roosted within Building 1.

During nocturnal surveys occasional foraging/commuting Common Pipistrelle, Soprano Pipistrelle, Noctule and *Myotis* bat sp. were logged with activity focused to the west of Building 1.

5.2. Building 2

5.2.1. Preliminary Roost Assessment

The results of the PRA surveys were consistent with those in 2019 and 2022.

5.2.2. Nocturnal Survey

No bats roosted within Building 2.

Occasional foraging/commuting Common Pipistrelle, Soprano Pipistrelle, Noctule and *Myotis* bat sp. were logged.

5.3. Wall

5.3.1. Preliminary Roost Assessment

No evidence of bat presence was found in any of the PRFs present. Following detailed endoscope inspection of all identified PRFs, the wall was assessed to be of **MODERATE** suitability for roosting bats (Table 1).

5.3.2. Nocturnal Surveys

5.3.2.1. Survey 1

Two Soprano Pipistrelle roosted within the wall. Both roost locations were on the interior of the wall, with Roost Access Point (RAP 1, **Photograph 2**) on the eastern wall and RAP on the northern wall (**RAP 2, Photograph 3**) (**Figure 3**).

Foraging activity was focused to the west of the survey area, with regular passes of Common and Soprano Pipistrelle along with occasional *Myotis* bat species and infrequent Brown Long-eared Bat passes. Activity was low across the remainder of the survey area.

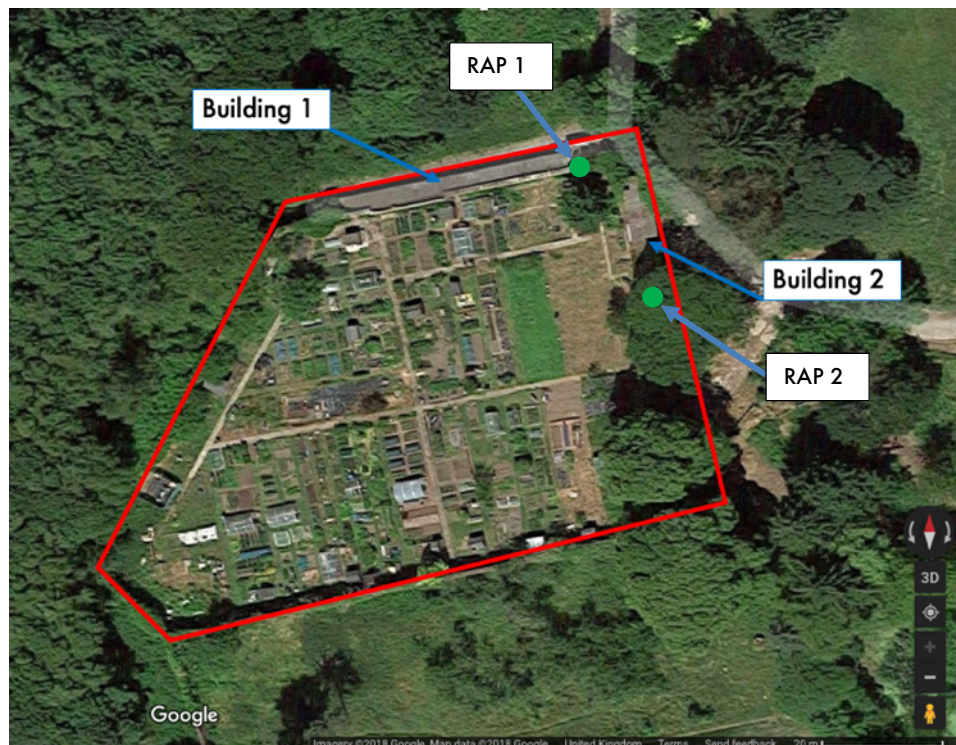
Photograph 2. RAP 1



Photograph 2. RAP 2



Figure 4. RAP 1 and RAP 2 locations



5.3.2.2. Survey 2

Two Soprano Pipistrelle roosted within the wall. Both roost locations were on the interior of the wall, with Roost Access Point (RAP 1, **Photograph 2**) on the eastern wall and RAP on the northern wall (RAP 2, **Photograph 3**) (**Figure 3**).

Foraging activity was focused to the west of the survey areas, with regular passes of Common and Soprano Pipistrelle along with occasional *Myotis* bat species. Activity was low across the remainder of the survey area.

6. Conclusions and Recommendations

6.1. Building 1 and Building 2

No evidence of roosting bats was identified within Building 1 or Building 2 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.

6.2. Wall

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 value⁹.

Table 3. Bat survey results summary

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

It is highly likely that the bats detailed within **Table 3** roosted in close proximity to the roost access points.

Impacts

The proposed works will result in the loss of both roosts.

Natural England Licencing

The confirmation of a roosting bat within the wall 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

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

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 disturb¹⁰ 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.

Supervision of Works

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).

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.

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 2F¹¹ bat boxes with double front panels are installed on trees around the periphery of the site prior to works with two 1FF Schwegler¹² bat boxes installed on the rebuilt wall.

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

¹² <https://www.nhbs.com/1ff-schwegler-bat-box-with-built-in-wooden-rear-panel>