



BAT RISK ASSESSMENT AND BAT SURVEY REPORT

**CLEATOR MILLS
CLEATOR**

**MEP-22-01
AUGUST 2022**



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BAT RISK ASSESSMENT AND BAT SURVEY REPORT

**CLEATOR MILLS
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CUMBRIA
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**GRID REF
NY019138**

REPORT FOR MANNING ELLIOT PARTNERSHIP

Quality Assurance

Version	Prepared by	Date	Checked by	Date	Approved by	Date
R1	Katie Pearson	01/09/2022	Connor Pimm	02/09/2022	Hannah Currie	05/09/2022

This assessment is intended to provide an accurate description of findings from the desktop study and from survey work undertaken on the dates shown; however, all ecological data has a shelf life, which is dependent on the discretion of the governing body overseeing licencing or condition application. This is usually one survey season. This assessment cannot fully account for the reliability of third-party data provided or for any changes to site conditions following the completion of the survey work due to activities carried out on site or the dynamic nature of the natural environment. All work carried out by Naturally Wild Consultants Ltd is subject to our Terms and Conditions.

The report has been produced in accordance with current best practice guidelines.

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EXECUTIVE SUMMARY

Naturally Wild were instructed to undertake a bat risk assessment and bat activity surveys, at Cleator Mills, Cleator. The survey area is comprised disused factory buildings and surrounding areas of hardstanding and grassland. The proposals are demolition of two of the factory buildings, and construction of a new warehouse unit, in addition to demolition of a third small building to the southern aspect of site.

The assessment comprised two parts: a desktop study and a series of survey visits. The desktop study collated available public information regarding the biodiversity of the area, including the habitat structure of the site and surrounding area and the presence of any statutory or non-statutory designated sites. In addition, bat records within 1 km of the site were obtained from the NBN Atlas.

The initial survey visit consisted of an assessment of all habitats on site and in the surrounding area to determine their value for bats (as well as other protected/notable species) and was conducted on 6th June 2022 by ecologist Craig Strawbridge.

The surveyed area was found to be of high ecological value overall, with suitable roosting opportunities identified for common pipistrelle and noctule bats, as well as suitable nesting habitat for birds. In addition, bats were found to be emerging and re-entering B1, which would require an EPS license to allow demolition and development works. The area of grassland and trees also offers suitable foraging and commuting habitat for a range of species such as hedgehogs and rabbits. A HRA may be required due to the proximity to River Ehen SSSI that could be impacted by the proposed works.

Providing the recommendations of this report are implemented in full, Naturally Wild would conclude that there will not be a significant impact to bats or any other protected species as a result of the proposed works.

BAT RISK ASSESSMENT AND BAT SURVEY REPORT: CLEATOR MILLS, CLEATOR

1 INTRODUCTION

Naturally Wild were instructed to undertake a bat risk assessment and bat activity surveys at Cleator Mills, Cleator (Figure 1). The survey area comprised disused factory buildings and surrounding areas of hardstanding and grassland. The main objective of the assessment was to determine the suitability of the site to support bats (and other protected species) and to check for any evidence of their presence, as well as the presence of any protected or notable habitats.

The proposals are to demolish two existing buildings and construct a new warehouse unit. As part of the planning process, an ecological assessment is required to determine if any protected or notable species/habitats are likely to be affected by the proposed works, and to show how any negative ecological impacts would be mitigated and compensated.

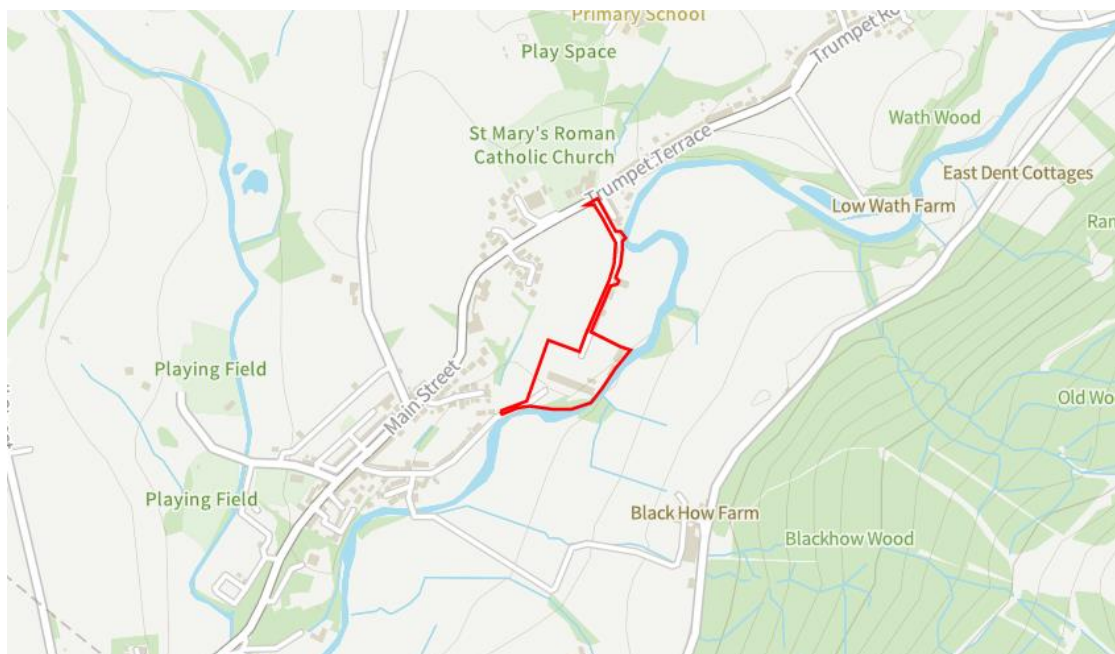


Figure 1. Site location plan. Red line shows the area proposed for development.

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2 RELEVANT LEGISLATION

British wildlife is protected by a range of legislation, the most important being the Wildlife and Countryside Act 1981, the Countryside Rights of Way Act 2000 and The Conservation of Habitats and Species Regulations 2017 (as amended).

The Wildlife and Countryside Act, as amended mainly by the Countryside Rights of Way Act, protects species listed in Schedules 5 and 8 of the Act (animals and plants respectively) from being killed, injured, and used for trade. For some species, such as great crested newts and all bat species, the provisions of this act go further to protect animals from being disturbed or taken from the wild and protects aspects of their habitats. The Act also stipulates that offences occur regardless of whether they were committed intentionally or recklessly. The parts of this legislation that apply to most reptile species are in regard to killing, injury and trade only and do not protect their habitat, nor are they protected from disturbance or from being taken from their habitat.

The Conservation of Habitats and Species Regulations ('the Habitats Regulations') is the English enactment of European legislation and provides similar but subtly different protection for species listed on Schedules 2 and 4 of those regulations. Species to which these provisions apply are known as European Protected Species. Activities that might cause offences to be committed can be legitimised by obtaining a licence from the relevant statutory body.

All British bat species are listed on Schedule 5 of the Wildlife and Countryside Act 1981 and are afforded protection under Section 9 of this Act. In addition, all British bat species are listed on Schedule 2 of The Conservation of Habitats and Species Regulations and are protected under Regulation 39 of these Regulations. The Act and Regulations makes it an offence to:

- Intentionally kill, injure, take (handle) or capture a bat;
- Intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (this is taken to mean all bat roosts whether bats are present or not) – under the Habitats Regulations it is an offence to damage or destroy a breeding site or resting place of any bat; or
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection – under the Habitats Regulations it is an offence to deliberately disturb a bat (this applies anywhere, not just at its roost) in such a way as to be likely to affect its ability to survive, breed, reproduce, rear or nurture its young, or hibernate.

Further details of the above legislation, and of the roles and responsibilities of developers and planners in relation to bats, can be found in Natural England's (formerly English Nature) Bat Mitigation Guidelines (Mitchell-Jones, 2004), and further details on the legislation protecting other species of British wildlife relevant to this assessment can be found in section 8.1 of this report.

3 METHODOLOGY

3.1 Overview

The assessment comprised two parts: a desktop study and a series of survey visits. All survey and assessment work has been completed in line with official guidelines produced by Natural England and the Chartered Institute for Ecology and Environmental Management, and British Standard document BS 42020: 2013 '*Biodiversity – Code of practice for planning and development.*'

The desktop study collated available public information regarding the biodiversity of the area, including the habitat structure of the site and surrounding area and the presence of any statutory or non-statutory designated sites, and any records of previously granted European Protected Species (EPS) mitigation licences in relation to certain species, using the Multi-Agency Geographic Information for the Countryside (MAGIC) resource. In addition, bat records within 1 km of the site were requested from NBN Atlas.

The objective of the surveys was to determine the suitability of the site for roosting bats and check for any evidence of their presence. This took the form of an initial bat risk assessment of the site, which was followed by two bat activity surveys. In accordance with good practice, the assessment would also ascertain if any other protected species may be using the site, document the habitats present and determine any potential ecological impacts during and following the completion of the works. The findings of the assessment would identify the need for any additional survey effort, mitigation measures and/or compensation to be incorporated into the proposed works. The bat activity surveys would be used to confirm the presence of roosting bats on site and determine the numbers and species of bats present, or to confirm likely absence, along with any further mitigation and/or compensation measures that may be required. All survey work would be completed under suitable weather conditions and by experienced ecologists.

The survey work and the preparation of this report has been conducted by ecologists Katie Pearson MSc BSc (hons), Craig Strawbridge, Colin Conroy MSc BSc (hons), Chris Lovell MSc BSc (hons) and Tim Asplin BSc (hons) who are experienced in carrying out ecological assessments, with assistance on survey work provided where necessary.

3.2 Survey Area

The application site is located at Grid Reference NY019138 and can be accessed via Mill Street. The assessment focused on the application site, as well as all habitats in the immediate surrounding area (where access was available).



Figure 2. Location of the surveyed area. Site boundary is shown by the red line.

(Image taken from Google Earth Pro: ©2022 Google)

3.3 Survey Constraints

The buildings had collapsed before a third bat activity survey could be conducted, due to extreme weather conditions. Therefore two bat activity surveys were carried out (including one dawn and one dusk survey).

3.4 Site Assessment

The initial survey was carried out on 6th June 2022 and consisted of an assessment of the habitats on site to determine their suitability for roosting bats. An assessment of the on-site buildings was carried out in order to identify the presence of any potential roost features (PRFs) for bats, and/or evidence of roosting bats, in accordance with the current Bat Conservation Trust (BCT) survey guidelines (Collins, 2016). An external inspection of the buildings was carried out, focussing on features that may provide roosting opportunities or access points to roosting features internally, such as the roof and ridge tiles. An internal inspection was also carried out, with any roof spaces present checked for any evidence of bats. The buildings were then categorised based on their assessed value for roosting bats, in accordance with the BCT guidelines, detailed in Table 1.

In addition, a preliminary ground level roost assessment of any trees on or directly adjacent to the site was carried out in order to identify the presence of any PRFs for bats, such as split bark, woodpecker holes and other cavities for bats and/or evidence of roosting bats. All trees assessed were categorised in terms of their value in accordance with the current BCT survey guidelines (Collins, 2016), shown in Table 1.

Table 1. Guidelines for assessing bat roosting potential of structures and trees.

Suitability	Habitat description	Further action required?
Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further bat risk assessment effort or bat activity surveys are required.
Low	A structure 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).	Structures: One bat activity survey is required to determine whether the structure is being utilised by roosting bats; this may be a dusk or dawn survey. This survey must occur between May and August. The discovery of a roosting bat during this single bat activity survey will require further survey effort.
	A tree of sufficient size and age to contain PRFs, but with none seen from the ground or features seen with only very limited roosting potential.	Trees: No further bat risk assessment effort or bat activity surveys are required.
Moderate	A structure or 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.	Two bat activity surveys are required to determine whether the structure or tree is being utilised by roosting bats; this should be comprised of one dusk and one dawn survey. One survey must occur between May and August.
High	A structure or 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.	Three bat activity surveys are required to determine whether the structure or tree is being utilised by roosting bats; this should be comprised of one dusk and one dawn survey, with an additional survey (either dusk or dawn). Two surveys must occur between May and August.

Evidence of roosting bats includes: bat droppings in, around or below an entrance hole; staining around an entrance hole; audible squeaking at dusk or in warm weather; smoothening of surfaces around cavity or an entrance hole; distinctive smell of bats.

The assessment was completed using ladders, binoculars and powerful torches. An endoscope was also available to check any small gaps/cracks for evidence of bats. The assessment was carried out by Ecologist Craig Strawbridge. Weather conditions were dry, with temperature 15°C, cloud cover 2 (oktas), and wind 3 (Beaufort scale).

3.5 Bat Activity Surveys

In addition to the above, as the buildings were determined to be of value for roosting bats during the initial assessment, in accordance with the above guidelines, two activity surveys were carried out. A dusk emergence survey was carried out on the evening of 7th July 2022 and a pre-dawn return to roost survey was carried out on the morning of 26th July 2022. The surveys were carried out by four surveyors using bat detectors (Echo Meter Touch 2 and Magenta Bat5) and direct visual observation. The surveyors took up suitable vantage points around the buildings in order to observe any bats emerging/returning to roost, with the detectors used to identify bat calls and confirm species present.

The dusk survey commenced 15 minutes before sunset and ended an hour and a half after sunset and the pre-dawn survey commenced an hour and a half before sunrise and concluded 15 minutes after sunrise. Naturally Wild staff who conducted the dusk and dawn surveys included ecologists Katie Pearson, Colin Conroy, Chris Lovell, and Tim Asplin, aided by three experienced assistant surveyors.

3.6 Other Wildlife

In accordance with good practice, the site and surrounding areas were assessed for their potential to support other protected and notable species and for the presence of any evidence of such. Based on the habitats present, the assessment was carried out with regard to badgers (*Meles meles*), great crested newts (GCNs) (*Triturus cristatus*), reptiles and nesting birds, as well as the presence of any invasive, non-native flora or fauna.

4 RESULTS

4.1 Desktop Study

4.1.1 Designated Sites

Statutory Designated Sites: Directly to the south east of site lies the River Ehen which is designated as a Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). Between Ennerdale Water and the confluence with the River Keekle at Cleator Moor the Ehen meanders across a narrow floodplain with extensive areas of riparian woodland and trees. This stretch of the river supports outstanding populations of the freshwater mussel (*Margaritifera margaritifera*). Collectively, this is the largest known population of this species in England and the only one showing recent recruitment. It is the third largest population in Britain. The SAC is also designated for the presence of Atlantic salmon (*Salmo salar*).

Clints Quarry SSSI is present approximately 1.4km southwest of the site at its nearest point. The quarry contains rich limestone flora on the site. Species-rich neutral and calcareous grasslands, woodland and shrub areas are present, which can provide suitable foraging, commuting, and nesting opportunities for a range of species.

The Lake District National lies approximately 1.4km northeast of the site at its nearest point.

Due to the demolition of three buildings and construction of a warehouse building on site, which is restricted to within the red line boundary, assuming appropriate mitigation measures are carried out (see section 5), impacts to clints quarry and the lake district national park are expected to be negligible. However, due to the sensitive nature of the River Ehen SSSI and SAC's local freshwater pearl mussel population, an endangered and protected species, this development is expected to have a significant impact on the river due to the demolition of a building directly adjacent to the river, which can result in pollution of the freshwater body via discharge from demolition and construction works. A recent desk-based study of the river by Natural England indicated that the phosphate levels are achieving Water Framework Directive "high" status, which is a common form of nutrient pollution. For this reason, high impacts are expected to be likely for this SSSI as a result of the proposed development.

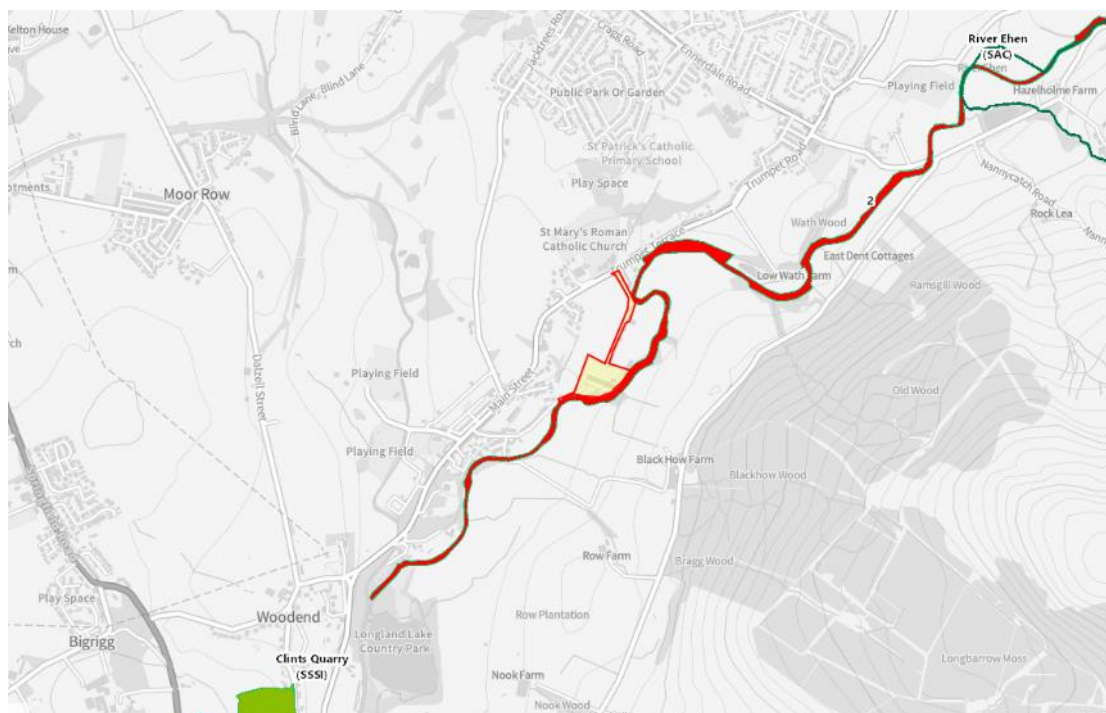


Figure 3. Location of the surveyed site in relation to the surrounding designated sites.

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Non-statutory Designated Sites:

Approximately 42km east of the proposed site at its nearest point lies Haweswater RSPB reserve. Haweswater comprises areas of ancient woodland, streams, heathland and moorland, as well as the central lake, and is 30km² in size. Red squirrels (*Sciurus vulgaris*), Atlantic salmon (*Salmo salar*), ring ouzel (*Turdus torquatus*), alpine wildflowers and mountain ringlet butterflies (*Erebia epiphron*) are all present at this site. Due to the distance from the proposed development site, and the small-scale nature of the works, any impacts to Haweswater are expected to be negligible.

Notable Habitats:

Fifty areas of deciduous woodland were present within 1km of the proposed development site. Lowland deciduous woodlands are classified as Habitats of Principal Importance (HoPI), under Section 41 of the NERC Act (2006) and provide suitable sheltering, foraging, and commuting habitat for a variety of UK species. Many are ancient woods with high variation in the canopy and ground flora, and can offer nesting opportunities for birds and roosting opportunities for bats within suitably mature trees, as well as sheltering and foraging habitat for other small mammals, reptiles, and amphibians within the understorey and ground layer. Additionally, there are numerous invertebrate taxa associated with woodland, and the deadwood often present offers opportunities for saproxylic species (those dependent on dead or decaying wood).

4.1.2 Bat Records

Bat records were obtained from the NBN Atlas for a 1 km radius surrounding the application site. A total of one bat record was returned, which was Natterer's bat (*Myotis nattereri*). This was not on or within close proximity to the site.

4.2 Bat Risk Assessment

4.2.1 On-Site Assessment

The site comprised four buildings, areas of hardstanding and an area of grassland with trees. The value of these habitats to bats for roosting, foraging and commuting activities are discussed below.

Hardstanding:

Areas of concrete hardstanding and gravel were present across the majority of site. This surface provides no nesting, foraging or commuting opportunities for wildlife, and therefore is considered to be of negligible value.

Grassland with Trees:

An area of low distinctiveness grassland was present to the southeast of site, which contained creeping thistle (*Cirsium arvense*), common dock (*Rumex acetosa*), perennial ryegrass (*Lolium perenne*) and white clover (*Trifolium repens*). This grassland could provide some nesting and foraging opportunities for birds and other mammals, however due to the area being small and low distinctiveness with little connectivity, it is considered to be of low ecological value.

Trees present on the area of grassland included ash (*Fraxinus excelsior*) and sycamore (*Acer pseudoplatanus*) at varying life stages. No obvious PRFs were observed during the initial site visit, however the trees offer suitable nesting and foraging opportunities for a range of wildlife, therefore they are considered to be of moderate ecological value.

Buildings: A total of four buildings are present on the site and each was assessed for its value to support roosting bats. The results of this assessment are summarised in Table 2 and the locations of each building are shown on Figure 4.

Table 2. Building descriptions and assessment of bat roosting suitability.

Building Ref.	Description	Assessment	Roosting suitability
B1	Sandstone block with steel trusses and slate roof, in a dilapidated state with openings across the building on all windows and areas of the roof.	In poor structural condition. Multiple access points in roof and at doorways. Cold and draughty internally, but many gaps in brickwork offered PRFs. No evidence of bats.	Moderate
B2	Sandstone block with steel trusses and slate roof, in a dilapidated state with openings across the building on all windows and areas of the roof.	In poor structural condition. Multiple access points in roof and at doorways. Cold and draughty internally, but many gaps in brickwork offered PRFs. No evidence of bats.	Moderate

B3	Red brick with steel trusses and asbestos roof in a dilapidated state with openings across the building on all windows and areas of the roof	In poor structural condition. Multiple access points in roof and at doorways. Cold and draughty internally, but some gaps in brickwork offered PRFs. No evidence of bats.	Low
B4	Small disused storage building adjacent to the river Ehen.	Considered to be unsuitable for roosting bats due to temperature and light variation within the building.	Negligible



Figure 4. Building locations. Red buildings are set to be demolished.

(Image taken from Google Earth Pro: ©2022 Google).

4.2.2 Off-Site Assessment

To the west of site lies the village of Cleator which comprises residential homes and associated amenity gardens. This area is likely to provide limited opportunity for nesting, foraging, and commuting for wildlife. The wider surrounding area is comprised of arable, and cattle grazed fields, which due to their intensive management, are also unlikely to support a range of wildlife. Due to the proposed works being restricted to the red line boundary, any impacts to the surrounding residential and farmland areas is likely to be negligible.

Directly to the south-east of site lies the river Ehen which is designated as a Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). Between Ennerdale Water and the confluence with the River Keekle at Cleator Moor the Ehen meanders across a narrow floodplain with extensive areas of riparian woodland and trees. This stretch of the river supports outstanding populations of the freshwater mussel (*Margaritifera margaritifera*). Collectively, this is the largest known population of this species in England and the only one showing recent recruitment. It is the third largest population in Britain. The SAC is also designated for the presence of Atlantic salmon (*Salmo salar*). Without appropriate mitigation, and possibly a Habitats Regulations Assessment, impacts to this area are expected to be high.

4.2.3 Bat Activity Surveys

Due to B1, B2 and B3 being assessed to have some value for roosting bats, two bat activity surveys were carried out on these buildings. The weather conditions for both surveys were considered suitable for bats to be active and are summarised in Table 3.

Table 3. Bat activity survey weather conditions.

Date	Survey start	Sunset/sunrise	Survey end	Temp. (°C)	Precipitation	Wind (Beaufort)	Cloud (Oktas)
07/07/2022	3:00	4:45	5:00	13	None	3	7
26/07/2022	21:10	21:25	23:00	17	None	2	2

Results of each of the bat activity surveys are provided in the paragraphs below, with notable findings summarised in Figure 4. It should be noted that only a summary of the key findings has been provided, although full results are available upon request.

During the first survey (dawn), a common pipistrelle (*Pipistrellus pipistrellus*; 'C. pip' on Figure 4) was recorded foraging along the southern elevation of B1 at 3:00 hrs. A common pipistrelle was also recorded foraging to the northern elevation of B2 and B3 at 03:15 hrs. At 04:10 a soprano pipistrelle (*Pipistrellus pygmaeus*) was observed entering B1 at the southwestern elevation. The overall level of bat activity was considered to be moderate, with constant foraging by common and soprano pipistrelles in small numbers to the south of buildings B1 and B2.

During the second survey (dusk), a common pipistrelle was recorded commuting from the trees west of B1 at 21:50 hrs. A common pipistrelle was also recorded commuting along the western end of B1 at 21:50 hrs. Noctule bats (*Nyctalus noctula*) were seen entering B1 through the southern doorway at 21:54 hrs. Common pipistrelle were seen exiting B1 from the upper central right window at 21:59 hrs, 22:05 hrs and 22:18 hrs. The overall level of activity was considered to be high, with foraging by numbers of common and soprano pipistrelles and noctules throughout the survey, as well as emergence and entries of noctule and common pipistrelle within B1.



Figure 4. Summary of bat survey results.

(Image taken from Google Earth Pro: ©2022. Map Data Google 2022)

4.2.4 Assessment Summary

The results of the building assessments and activity surveys carried out would indicate that B1 is used on an occasional basis by small numbers of common pipistrelle and noctule, but are not roosts of significant conservation value, such as maternity or hibernation roosts. Notwithstanding this, in the absence of suitable mitigation, any works carried out on these buildings are highly likely to result in the damage or destruction of the roosts present, with the proposed demolition works on B1 resulting in the permanent loss of roosting habitat. This is considered likely to have a high negative impact at site level but, due to the low numbers of relatively common bats present, a low impact at a wider level.

Based on the results of the surveys carried out, it will be necessary to implement appropriate mitigation and compensation measures as part of the re-development works in order to ensure that the proposals do not have a significant negative impact on the roosting bats present on site.

4.3 Other Wildlife

The site was considered to be of negligible value for badgers, GCNs and reptiles due to a lack of suitable sheltering habitat and potential for sett creation for badgers. Adjacent habitats were also considered to be of low to negligible value for these taxa for the same reasons. The surrounding grassland could provide suitable foraging habitat for badgers, but again was considered to be of limited value for sett creation. The works are expected to have a negligible impact on any of these species.

All of the buildings were considered to have value for nesting birds. A relatively high level of swallow (*Hirundo rustica*) and blackbird (*Turdus merula*) activity was also noted during both bat activity surveys. Without appropriate mitigation and compensation (see section 5), the works are expected to have a moderate to high impact on nesting birds at a site level, but a low impact at a wider level.

A population of the protect species river pearl mussel is known to be present within the river Ehen which runs adjacent to the site. The demolition and development within close proximity to this SSSI is expected to have high impacts on this species and habitat, therefore a Habitat Regulations Assessment may be required.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The site was identified as having high ecological value overall, with suitable roosting opportunities identified for common pipistrelle and noctule bats, as well as suitable nesting habitat for birds. The area of grassland and trees also offers suitable foraging and commuting habitat for a range of species such as hedgehogs and rabbits. A HRA may be required due to the proximity to river Ehen SSSI that could be impacted by the proposed works. Following the site assessment and in review of the findings, Naturally Wild would recommend the following:

5.2 Mitigation Measures

- Although not considered to be a roost of significant conservation value, due to the confirmed presence of a roost in B1, it will be necessary to obtain a European Protected Species (EPS) mitigation licence to legally permit the demolition works on the building that will result in the loss of the bat roost. Once a licence had been granted, works would need to be carried out in a precautionary way, following the 'soft-strip' protocol, removing roof tiles and other suitable features for bats under the supervision of a suitably qualified and licensed ecologist, with a thorough inspection carried out beforehand and any bats found prior to or during the demolition being carefully caught by the attending ecologist and moved to a suitable location elsewhere on site (see below). A specific methodology for the works, as well as suitable compensatory habitat to provide alternative roosting opportunities, would be provided within the EPS licence application documentation to be submitted to Natural England, but an indication of compensatory habitat to be provided is given in section 5.2, below.
- Due to the suitability of the buildings to support nesting birds, demolition works should be carried out outside of the nesting season, which is defined as running from March to August, inclusive. If this is not feasible for any reason, a nesting bird survey must be carried out by a suitably qualified ecologist shortly prior to the start of works to ensure no active nests are present. In the event that any active nests are found during this survey or at any point during the works, a suitable exclusion zone should be put around the nest, with no work taking place in this area until such time as the nest can be confirmed as no longer active.
- Due to the suitability of the area of grassland to support hedgehogs, works should be carried out in a precautionary manner in relation to hedgehogs, with any hedgehogs encountered during the works allowed to move off of their own accord. If this is not feasible, they should be carefully moved to a safe location by gloved hand. If clearance works are being carried out during hedgehog hibernation season (defined as November to March), any structures suitable for hedgehog hibernation such as vegetation piles should be checked for hibernating hedgehogs. If a hibernating hedgehog is present, a suitable exclusion zone should be put around the hedgehog, with no works occurring in this area until the hedgehog has moved off of its own accord. If this is not feasible, the hedgehog will be carefully translocated to suitable off-site habitat by a suitably qualified ecologist under appropriate weather conditions. New nesting material and supplementary food safe for hedgehog consumption will be provided at the translocation site.
- A walkover survey/check must be carried out within 3 months prior to an EPSL application submission by a suitably experienced ecologist to ensure that conditions have not changed since the most recent survey was undertaken.

- Any retained trees are to be protected using *Heras* or equivalent fencing around their Root Protection Areas, in accordance with British Standard documentations BS 5837:2012 – ‘*Trees in relation to design, demolition and construction. Recommendations.*’ Advice from a professional arboriculturist should be sought when establishing the protection areas.
- A sensitive lighting scheme should be implemented during and after construction to avoid indirect disturbance to foraging and commuting bats, birds and small mammals that may be using the nearby river, trees and grassland, and should include the following elements:
 - Sensitive positioning of lighting to avoid unnecessary spill onto the nearby river, trees and grassland.
 - Angle of lighting: avoidance of direct lighting and light spill onto areas of habitat that are of importance as commuting pathways and/or foraging areas;
 - Type of lighting: studies have shown that light sources emitting higher amounts of UV light have a greater impact to wildlife. Use of narrow-spectrum bulbs that avoid white and blue wavelengths are likely to reduce the number of species impacted by the lighting;
 - Reduce the height of lighting columns to avoid unnecessary light spill.

5.3 Compensation Measures

- Any landscape planting should use native plant species and/or species of known wildlife value that will enhance the ecological value of the site for local populations of invertebrates, birds, bats, and small mammals.
- A series of 2F Schwegler bat boxes should be incorporated into the development to provide enhanced crevice-style roosting and nesting habitat for common pipistrelle, in addition to cavity-style bat boxes on the surrounding trees to support local noctule populations.

5.4 Enhancement Measures

- Any landscape planting should use native plant species that will enhance the ecological value of the site for local populations of invertebrates, birds, bats and small mammals.
- A series of bird and bat boxes should be incorporated into the development to provide enhanced roosting and nesting habitat.

Providing the recommendations of this report are implemented in full, Naturally Wild would conclude that there will not be a significant impact to bats or any other protected species as a result of the proposed works.

6 SITE IMAGES



Image 1. B1 and B2 from the south-eastern aspect. Bat entry/exit



Image 2. Western aspect of B1, with bat entry point highlighted.



Image 3. Area of grassland and trees to the southern aspect of site.



Image 4. River Ehen to the south and east aspect of site.



Image 5. Western aspect of B2



Image 6. Area of grassland with B3 in the background.

7 BIBLIOGRAPHY & REFERENCES

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8 APPENDICES

8.1 Additional Information for the Legislation of Other Protected Species

Badgers: The badger is geographically widespread across the UK; however, they are still vulnerable to baiting, hunting and detrimental impacts of development to their habitat. Both the badger and its habitat are protected under The Protection of Badgers Act 1992, Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) an Appendix Three of the Bern Convention; therefore, badgers have legal protection against deliberate harm or injury and it is an offence to:

- Interfere with a badger sett by damaging or destroying it
- Kill, injure, take or possess a badger
- Cruelly ill-treat a badger
- Obstruct access to a badger sett
- Disturb a badger whilst it is in a badger sett

Nesting Birds: Birds receive protection under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally or recklessly kill, injure or take any wild bird; take, damage or destroy a nest of a wild bird whilst it is in use or being built; or to take, damage or destroy an egg of a wild bird. The bird-nesting season is defined as being from 1st March until 31st August with exceptions and alterations for some species.

Great Crested Newts: Great crested newts are protected under Schedule 2 of The Conservation of Habitats and Species Regulations. This species is also afforded full protection under the Schedule 5 of the Wildlife and Countryside Act 1981. Under such legislation it is an offence to:

- Intentionally or recklessly* kill, injure or capture a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great ^[1]_[SEP]crested newt;
- Intentionally or recklessly* damage, destroy or obstruct access to any structure or ^[1]_[SEP]place used for shelter or protection by a great crested newt; and
- Intentionally or recklessly* disturb a great crested newt while it is occupying a ^[1]_[SEP]structure or place which it uses for that purpose.
- Damage or destroy a breeding site or resting place.
- Sell, barter, exchange or transport or offer for sale great crested newts or parts of them.

**Reckless offences were added by the Countryside and Rights of Way Act 2000, which applies only to England and Wales.*

To undertake surveys for great crested newts it is necessary to hold an appropriate licence issued by Natural England.

Reptiles: All native British species of reptile (of which there are 6) are listed on Schedule 5 of the Wildlife and Countryside Act 1981 and, as such, are protected from deliberate killing, injury or trade; therefore, where development is permitted and there will be a significant change in land use, a reasonable effort must be undertaken to remove reptiles off site to avoid committing an offence. The same Act makes the trading of native reptile species a criminal offence without an appropriate licence.