



Preliminary Roost Appraisal

Milton Mount Scout Hut

Clients Name: Wakes Ltd.

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ECOassistance were commissioned to carry out a Preliminary Roost Appraisal/bat scoping survey, on a former scout hut at Milton Mount in Gravesend, Kent.

The survey is to inform part of a planning application for 20211092 | Demolition of existing hall and outbuildings and erection of a 4 storey building containing 14 x 2 bedroom flats, driveway and parking for 17 cars.

No bat field signs were found internally or externally despite extensive searches by a suitably qualified and experienced bat worker. Most parts of the building were deemed to be wholly unsuitable for use by bats but it was not possible to survey all of the cavities within the walls or rule these out as having no bat roost potential. These cavities have therefore been deemed to have 'low' roosting potential.

Due to the perceived unlikelihood of bats being present owing to a complete lack of field signs; lack of bat records and connectivity of the site with the wider area as well as there being no possibility of carrying out a follow-up emergence survey before mid-May 2022 an avoidance methodology to facilitate safe removal of the building is deemed proportionate.

A precautionary working methodology will ensure demolition works do not contravene the legislation protecting bats providing:

- Works are carried out under the supervision of a qualified bat worker.
- External wall materials are removed by hand and in stages to allow inspection by the bat worker.
- If any signs of bat habitation are found including droppings, bat smell or bats, demolition works will cease so that emergence/re entry surveys can be undertaken.

The areas surrounding the site are considered to provide some low value opportunities for foraging and commuting bats therefore sensitive lighting measures are recommended.

Disclaimer

This report considers the instructions and requirements of the client and is not intended for and should not be relied upon by any third party.

The results contained within this report can be relied on for decision-making purposes without the need to be updated for twenty-four months providing there is no significant change in land use or land management in that time. Interpretations and recommendations contained in this report represent the author's professional opinions. They are based on currently accepted industry practices and personal experience. This is a working document and must be updated if development proposals change, or new information become available.

ECOassistance were instructed by Mr. Graham Wakeman from Wakes Ltd. (Hereafter: the client) to undertake a Preliminary Roost Appraisal (hereafter: PRA), sometimes referred to as a bat scoping survey to inform a planning application for: Demolition of existing hall and outbuildings and erection of a 4 storey building containing 14 x 2 bedroom flats, driveway and parking for 17 cars - at Milton Mount Scout Hut, Old Road East Gravesend, DA12 1NQ. The grid reference for the approximate centre of the site is: TQ649729. The scout hut is currently empty and disused.

All native species of bat are protected by law; this is mainly under the Conservation of Habitats and Species Regulations 2017 and the 1981 Wildlife & Countryside Act as amended. More detailed information on the relevant legislation protecting bats is provided in the appendix.

The key objectives of surveys undertaken are as follows:

- Assess the presence or likely absence of bat roosts at the site.
- Characterise the roost size and type if bats are found to be present.

The report discusses the survey findings and makes recommendations on further courses of action to be taken.

The site

Figure 1 below shows the extent of the site and the immediate surrounding habitat. Figure 2 shows the site situated within the dense urban sprawl that makes up the wider area.



Figure 2: The site is located within a dense urban setting

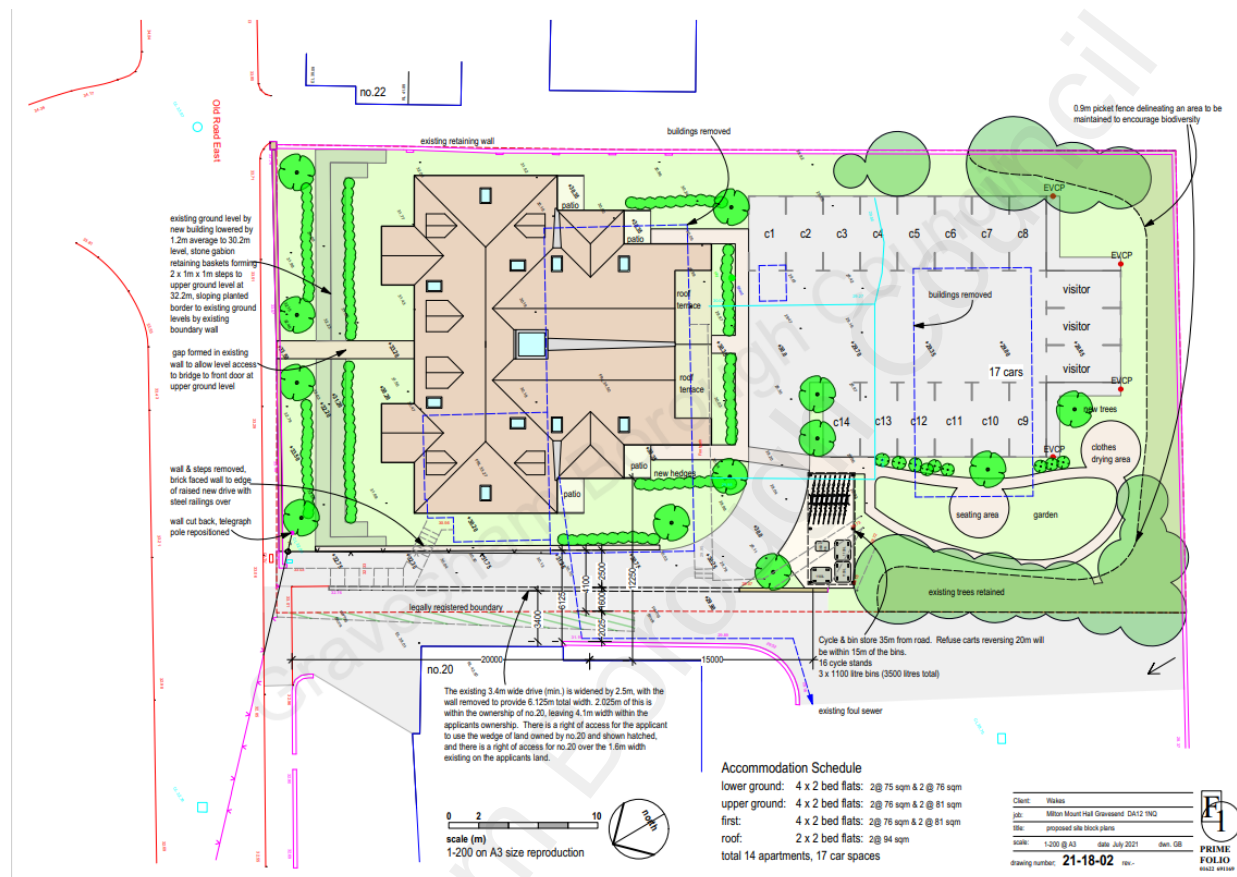


The site comprises the scout hut, which is ostensibly two timber sheds abutted together side by side and some surrounding vegetation. The scout hut is of relatively lightweight construction with external weather cladding, a corrugated asbestos/concrete roof on part metal; part timber frame, with multiple timber-framed windows.

Figure 3: view of scout hut from the north



The proposed development requires demolition and removal of the former scout hut to provide parking. Figure 4 below shows architectural plans provided by the client which show the proposed block plan for redevelopment. The existing trees surrounding the scout hut are to be retained and some additional planting of trees and hedgerows is shown.



Methodology

Desk Search

A desk study using freely available resources was conducted to:

- Search for records of bats within 2km of the site; and
- Search for local statutory and non-statutory land-based designations relevant to bats within 2km of the site.

Defra freely available resource: MAGIC App, was used to identify and locate records of granted EPSM licenses for bats within 2km of the site.

An aerial map search was used to assess habitat connectivity of the site with the wider area and identify habitats of value within the wider area.

Site survey

Overview

The PRA was conducted by ecologist Edward Clark. Edward has more than 20 years professional and voluntary ecological survey experience and holds various Natural England and NPTC survey licences including a level 2 bat science and conservation survey licence (Class licence number: 2018-33670-CLS-CLSCS38).

The survey was undertaken on 22/11/21 in fair weather conditions.

The scout hut was assessed for its perceived bat roosting potential and/or if the presence of roosting bats could be confirmed. Following the most recent guidelines published by the Bat Conservation Trust (BCT) and English Nature it has been assigned one of the following ratings:

- confirmed roost
- high potential
- moderate potential
- low potential
- negligible potential

The assessment takes into consideration the design and construction of the building, the size and location of potential features and access points, the position, aspect, geographical location, surrounding land use and adjacent landscape connectivity. The rating informs what further survey effort, if any, is required.

Activity and equipment

Binoculars and a Clulite CB2-L2 clubman torch were used to identify potential roosting features (PRF) and evidence of bat signs both internally and externally. Accessible cavities, crevices and recesses were surveyed with torches and/or an endoscope, including entry and exit points such as missing roof tiles, loose fascias and lifted lead flashing; urine staining, discolouration or scratch marks; bat droppings, feeding remains and dead or living bats. Other survey equipment included an android tablet device for making notes and taking photos, survey mirrors, a magnification lens, survey sample tubes, a telescopic survey ladder, a 'Flir One pro' thermal imaging device and a Dewalt DCT410 endoscope.

Constraints and Limitations

The desk study is not comprehensive as species and habitat types especially ephemeral or migratory species may be present but under recorded or missed entirely. A data search from the Local Ecological Records Centre (LERC) was not commissioned and this document instead relies on freely available resources.

Although the survey was carried out in fair weather, there had been some sustained periods of rain in the weeks preceding the PRA. This would undoubtedly have led to washing of the external roof and wall coverings which might have removed deposited bat droppings. However, on a dry day when the site was visited the preceding weather conditions would be unlikely to have masked signs of access around PRF such as discolouration or scratch marks and these were not found.

Results

Desk search

There were no European protected species licence (EPSL) applications for bats within 2km of the site. The nearest was c. 3290m northwest of the site at grid reference: TQ62017449 (2016-21327-EPS-MIT). This was for a common pipistrelle *Pipistrellus pipistrellus* roost. The distance between the site and the nearest recorded EPS return is shown in Figure 5 below.

Figure 5: Nearest bat EPSL record



Both the Bakers Hole SSSI and the Thames Estuary & Marshes SSSI and RAMSAR sites are outside of 2km distance and neither designation is in relation to important assemblages of bats.

A look at data from the NBN atlas found no records of bats within 1km of the site boundaries.

The trees and hedgerows to be retained around the site have some 'low potential' to be used by commuting and foraging bats. These are not well connected to linear features in the wider area and are not connected to high potential habitats such as woodland or pasture. The site is at least 1500m from riparian habitats.

Site Survey

External Inspection

The scout hut resembles two large storage sheds from the outside. Externally, the weather boarding is in good order but there are occasional small gaps which provide potential access to a cavity between the internal and external wall coverings. None of these PRF are obvious or have any signs of usage by bats including discolouration around or beneath the PRF, including scratch marks or obvious smoothing.

Throughout the length of the scout hut at the eaves are gaps where the roof covering meets the walls. These could allow bats access to the internal space.

The scout hut sits on top of several linear brick plinths which run parallel to the apexes of the sheds. This has created several partitioned voids beneath the scout hut; presumably to combat rising damp. A photo showing a partition beneath the south westernmost part of the shed is reproduced in Figure 5 below.

Figure 6: View of part of the partitioned void beneath the shed



These voids are open at both ends and strong airflow was experienced when looking through them at either end.

Internal Inspection

From inside the scout hut the number of potential access points was even clearer to see. The number of gaps throughout created climactic conditions that were drafty and unsuitable for open dwelling species.

Bat field signs would have been obvious within the 'main hall' which had white painted walls and a fairly clean and painted floorboards as shown in Figure 6 below. With the number of potential openings, any visitation by bats to this area would have been conspicuous to an experienced and competent bat building surveyor but no signs of bat habitation were encountered despite extensive searches..

Figure 7: view of the main hall



In all rooms much of the internal lining of the corrugated asbestos roof had been removed, reducing potential roosting opportunities for crevice dwelling species. Where the internal boarding remains it appeared to be a type of chipboard or fiber board with no evidence of any infill/insulation.

In the areas where boards and cavities remained, searches with survey mirrors and endoscopes found no signs of bat habitation. It is clear from the lack of any insulating material and structural layout that these voids would have been subject to substantial airflow, rendering it unsuitable for roosting bats. Figures 7 & 8 below show opposite sides of the scout hut (southeast and northwest respectively) all of which are open promoting airflow through the roof cavity and the entire building.

Figure 8: open eaves on south east side



Figure 9: View of open eaves on northwest of main hall. Photo taken in the dark



In some of the smaller rooms off the main hall section, small accumulations of rat *Ratus ratus* and unidentified mouse *Mus sp.* dropping were encountered. These were occasional and sporadic.

Cavities have been created within the walls with additional timber cladding throughout the internal space. The cavities between the internal and external coverings could not be fully inspected at the time of survey. Where loose boards were encountered these were pulled back or removed to assess the cavity and allow a further search for bat field signs. An area where boards were removed by the surveyor is shown in Figure 9 below.

Figure 10: loose boards removed for inspection of the cavity between wall coverings



In the areas inspected no insulating material or signs of bat habitation were found. However, these cavities have some suitability for crevice dwelling species of bat.

Conclusion

Surrounding habitats

The desk search indicates there are very few records of bats within the immediate vicinity of the site and no high suitability habitats for foraging and roosting such as parcels of woodland or linear connecting features which bats might utilize for commuting corridors.

There is some low potential for foraging and commuting over and around the site. The vegetation to be retained on the site is relatively significant when compared to that of the surrounding area. If bats are present in the vicinity they may well visit the site. Light aversive species may be present, although this seems less likely due to the urban setting.

Scout Hut

Bats require a stable micro-climate in terms of humidity for summer roosts and both humidity and temperature for winter hibernation roosts. A stable micro climate whilst they are inactive (during torpor or hibernation) ensures their wing membranes do not dry out. The cavities both beneath the scout hut and in the roof did not provide this; these areas were more akin to wind tunnels. The internal rooms were also noticeably drafty as a result of these features.

There were an abundance of potential access points to the internal areas of the scout hut but the internal inspection found no evidence of bats having been present; including within accessible cavities and on top of ledges in the apex of the (partially open) roof void. This provides further indication as to the unsuitability of the building and/or the low number of bats present in the surrounding area.

The cavities that are present within the walls of the structure between internal and external covering could not be fully inspected. These areas have some low potential to be used by opportunistic roosting bats.

- For the reasons above the scout hut is deemed to have 'low potential' for roosting bats.

Recommendations

In order to facilitate removal of the scout hut outside of the bat survey season it is recommended that an avoidance methodology be followed. NE advocates the use of good practice and avoidance measures to minimise the impact of a proposed activity on wildlife, and in particular European Protected Species (EPS) to avoid committing offence.

For this site, an avoidance methodology has been deemed appropriate because:

- There are a complete lack of field signs;
- Most of the building has negligible suitability for roosting bats;
- The habitat surrounding the site and in the wider area and lack of bat records suggest low numbers of bats are likely to be present and using the site.

In order to ensure there is no harm to bats a precautionary methodology of stripping materials by hand under ecological supervision is required.

- It is recommended that the external boards covering the walls be removed by hand under the supervision of a qualified bat worker outside of the main activity season which is May – September to enable search for bat field signs within the cavities.
- A single board should be removed on each section allowing the bat worker to inspect the cavity before gradually opening it up further.
- Should any bat signs be found, work must stop.

Please note that following an avoidance statement is a legal alternative to emergence and re entry surveys only up until field signs suggesting a roost are encountered

- Working under an avoidance method statement provides an option to attempt to continue works if bat surveys cannot be carried out due to being outside of the survey season.
- Bat roosts – 'places of rest or shelter' - are protected whether or not they are occupied by bats and therefore the presence of evidence of occupation confirms a 'roost'.
- Should any further bat signs be found including droppings, bat smell or bats, work must stop and emergence/re entry surveys in line with best practice will need to be undertaken to inform and enable a licence application to impact a roost.

Surrounding habitats

The areas surrounding the site are considered to provide low potential for foraging and commuting bats.

Although it is unlikely, it must be assumed without further survey effort that light averse species are present and using the habitats surrounding the site. The small parcels of grassland on the site and in the wider area; and the scattered trees and hedges provide some suitable commuting and foraging opportunities for bats.

Bat activity surveys to ascertain whether light sensitive bat species are using the site to inform a lighting strategy would be expensive and time consuming. It is recommended that the presence of such species be assumed and any disturbance from excess lighting be avoided both during and after works on both buildings through the following precautionary measures:

- New lighting at the site should avoid lighting any key habitats and features; this includes the retained trees and hedgerow.
- New external lighting should be restricted to downward facing lighting and low-level downlights such as downward facing bollard lighting wherever possible.

- Artificial lighting affixed to the new buildings should be activated by motion sensors wherever possible.
- During all works the works site must not remain lit after dark.

This will have the additional benefit of reducing the impact of artificial lighting at the site as a result of development for all nocturnal species.

Site enhancements for bats

In line with National Planning Policy Framework (NPPF) 2018: Sustainable Development And Biodiversity Net Gain, sustainable development requires planning policy and planning decisions to help to 'improve biodiversity' (paragraph 8c). With this in mind, it is recommended that at least one woodcrete type bat box of the schwegler type or similar be installed at the site to increase roosting opportunities.

It is recommended that a tree hanging bat box of Schwegler type 1 F or similar can be affixed to a mature or semi mature tree on or near the site or a building-mounted bat box of type schwegler 2FE or similar can be affixed post-construction to a

Bat boxes should be of the woodcrete type to ensure longevity. Standard advice is that they are: erected in a sheltered location, in close proximity or with a strong unlit linear connection to good quality foraging habitat. For all types of boxes, Collins et al. (2020) found that the box height most frequently occupied was 4m (2020). A height of at least 3 metres is recommended; to be hung from a mature tree in the grounds.

Suitable bat box designs for pipistrelle bats are given in the appendix¹.

Should further surveys for bats be required, the recommendations made for site enhancements for bats made in the activity survey report will be informed by survey data and should supersede those given in this report.

¹ the products shown are from the NHBS website: www.nhbs.com

References

Bat Conservation Trust (2016). Bat Surveys - Good Practice Guidelines. Bat Conservation Trust, London. IEEM (2006).

H.M.S.O. (2017) Conservation of Habitats Species Regulations.

(1981) Wildlife and Countryside Act 1981. H.M.S.O., London.

Bat Workers Manual, JNCC, Peterborough. Joint Nature Conservation Committee (2016). Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. JNCC, Peterborough.

National Planning Policy Framework. H.M.S.O., London. Rose, F (2006)

<https://magic.defra.gov.uk/MagicMap.aspx>

<https://records.nbnatlas.org/>

Gravesham Borough Council

Review of Protected Species UK Legislation and Policy

The level of protection afforded to protected species varies dependent on the associated legislation. A full list of protected species and their specific legal protection is provided within the Schedules and/or Sections of the associated legislation. Case law may further clarify the nature of the legal protection afforded to species.

The legal protection afforded to protected species overrides all planning decisions. European Protected Species (EPS) - and the Conservation of Habitats and Species Regulations 2010 (as amended)

European Protected Species (EPS) are afforded the highest level of protection through the Conservation of Habitats and Species Regulations 2017. EPS are also afforded legal protection by parts of the Wildlife and Countryside Act 1981 (as amended).

In general, any person and/or activity that:

- Damages or destroys a breeding or resting place of an EPS. (This is sometimes referred to as the strict liability or absolute offence);

- Deliberately captures, injures or kills an EPS (including their eggs);

- Deliberately disturbs an EPS, and in particular disturbance likely to impair animals' ability to survive, breed or nurture young, their ability to hibernate and migrate and disturbance likely to have a significant effect on local distribution and abundance;

- intentionally or recklessly disturbs an EPS while occupying a structure or place used for shelter and/or protection (Wildlife and Countryside Act 1981) (as amended); and

- Intentionally or recklessly obstructs access to any structure or place that an EPS uses for shelter or protection (Wildlife and Countryside Act 1981) (as amended). may be guilty of an offence.

The legislation applies to bat roosts even when they are not occupied.

Actions affecting multiple animals can be construed as separate offences and therefore penalties can be applied per animal impacted.

Under certain circumstances licences can be granted by the Statutory Nature Conservation Organisation (Natural England in England) to permit actions that would otherwise be unlawful.

There are some very specific defences associated with the Conservation of Habitats and Species Regulations 2017. However, these are unlikely to apply to construction related projects. The Sections of the Regulations provide further details of these defences.

The Wildlife and Countryside Act (1981) includes defence for those aspects of the legislation that apply to an EPS. These defences are unlikely to apply to construction related projects and do not apply to those acts included in the Conservation of Habitats and Species Regulations 2017 (as amended). The Schedules of the Act provide further details of defences.

Local authorities have obligations under sections 40 and 41 of the Natural Environment and Rural Communities Act (NERC) 2006 to have regard to the purpose of conserving biodiversity in carrying out their duties. The majority of EPS are listed on Section 41 the NERC Act.

The Natural Environment and Rural Communities Act 2006 (as amended)

Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act (2006) requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers, including local and regional authorities, in implementing their duty under Section 40 of the act to have regard to the conservation of biodiversity in England when carrying out their normal functions. S41 lists 56 habitats and 943 species of principal importance. Section 42 of the NERC Act relates to Wales.

Wildlife and Countryside Act 1981 (as amended)

The level of protection afforded to species listed on the Wildlife and Countryside Act 1981 (as amended) varies considerably.

'Fully protected species', such as bats, are afforded the highest level of protection. Any person who intentionally kills, injures, or takes 'fully protected species', or who intentionally or recklessly damages or destroys a structure or place used for shelter and/or protection, disturbs the animal whilst occupying a structure and/or place used for shelter and protection, or obstructs access to any structure and/or place used for shelter or protection is likely to have committed an offence.

The National Planning Policy Framework

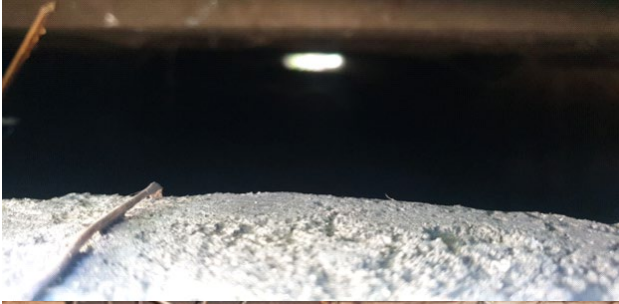
Planning policy requires new developments to take into consideration our local and national wildlife. With the objective to maintain or increase the viability of the site for wildlife. The existing proposals are considered to determine whether Habitat enhancements are offered and whether they are adequate to meet the policy requirements. Again, national, regional, county and borough policies are considered.

The National Planning Policy Framework states that the planning system should contribute to and enhance the natural and local environment by minimizing impacts on biodiversity and delivering net gains in biodiversity where possible.

Ecological habitat enhancements measures need to be over and above any mitigation measures.

Appendix 2: Bat box design and site photos





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