

**BUILDING X78, QINETIQ SITE,
FORT HALSTEAD, KENT**

BAT PROTECTION STRATEGY

A Report to: QinetiQ

Report No: RT-MME-150872-08 Rev B

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

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The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

DISCLAIMER

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

In August 2020, QinetiQ commissioned Middlemarch Environmental Ltd to produce a Bat Protection Strategy associated with the strategic redevelopment of QinetiQ owned land within Fort Halstead. A full description of the proposals is provided in Section 1.3.

A range of ecological surveys were completed by Waterman Group between 2006 and 2013 and by Middlemarch Environmental Ltd in 2018, with further updated surveys in 2020, to inform a separate hybrid planning application associated with the redevelopment of the site. Land surveyed as part of these assessments included QinetiQ owned land.

Middlemarch Environmental Ltd was subsequently instructed to undertake a full suite of targeted surveys of the QinetiQ owned land, comprising:

- Preliminary Arboricultural Assessment (Report RT-MME-150872-01);
- Arboricultural Impact Assessment (Report RT-MME-150872-02 Rev A);
- Preliminary Ecological Appraisal (Report RT-MME-150872-03 Rev A., Appendix 2);
- Preliminary Bat Roost Assessment (Report RT-MME-150872-04 Rev A, Appendix 3);
- Badger Survey (Report RT-MME-150872-05 Rev A, Appendix 4);
- Dusk Emergence and Dawn Re-Entry Bat Surveys (Report RT-MME-153340-01 Rev B, Appendix 5); and,
- Winter Hibernation Bat Survey (Report RT-MME-153704-02 Rev B).

An Ecological Mitigation Strategy (EMS, Report RT-MME-150872-06 Rev A) and a Bat Mitigation Strategy for Building X9 (Report RT-MME-153704-01 Rev A) have also been prepared.

Middlemarch Environmental Ltd has also prepared a Construction Ecological Management Plan (CEcMP, Report RT-MME-153844-03 Rev C), undertaken a Biodiversity Net Gain Assessment (Report RT-MME-153844-02 Rev B) and prepared a Landscape and Ecological Management Plan (LEMP, Report RT-MME-153844-03 Rev B) for the QinetiQ redevelopment.

1.2 DEVELOPMENT SITE DESCRIPTION AND CONTEXT

The wider Fort Halstead site is located off Star Hill Road in Halstead, Kent, centred at National Grid Reference TQ 4970 5922. It is an irregular shaped parcel of land that measures 131.89 ha in size. The wider Fort Halstead site is bordered by the A224 Polhill to the north-east and Star Hill Road to the south-west. A mixture of arable and pastoral fields, pockets of woodland and farm buildings surround the site. The wider landscape is dominated by a rural setting, consisting of agricultural land interspersed with pockets of woodland and small settlements.

The planning application site extends to 15.8 ha and sits within the wider Fort Halstead site. The site is known as the QinetiQ enclave and is located on the southern-most boundary of the wider Fort Halstead site. The application site is bound by Crow Road to the north, the Scheduled Ancient Monument to the east, ancient woodland to the west and the existing site perimeter fence to the south.

At the time of the survey, the QinetiQ enclave comprised a defence research facility which contained a number of buildings with associated areas of hardstanding, surrounded by parcels of semi-natural and plantation woodland. Areas of neutral grassland, calcareous grassland and amenity grassland were also present, as well as patches of scrub and tall ruderal vegetation.

1.3 DESCRIPTION OF PROPOSED WORKS

The proposals for the site are as follows:

Works to the proposed QinetiQ enclave comprising the erection of perimeter security fence, erection of a new reception building, creation of a new main site entrance along Crow Road, refurbishment of existing buildings including plant installation, creation of a new surface level car park and access, installation of two new explosive magazine stores and surrounding pendine block walls, demolition of

existing buildings, installation of 6no. storage containers, installation of new site utilities and landscaping works.

1.4 DOCUMENTATION PROVIDED

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.1.

Document Name / Drawing Number	Author
Proposed Site Plan / 30002236-BHK-00-XX-DR-A-003	Baker Hicks

Table 1.1: Documentation Provided by Client

2. ECOLOGICAL BASELINE

2.1 DESK STUDY

As part of the Preliminary Ecological Appraisal completed for the site in 2018 (Report RT-MME-127947-01 Rev A) an ecological desk study (which included a search for records of bats) was undertaken within a 2 km radius of the wider Fort Halstead site. The consultee for the desk study was Kent and Medway Biological Records Centre.

The consultees provided records of at least seven species of bat (common pipistrelle, soprano pipistrelle, noctule, Leisler's bat, Natterer's bat, serotine and brown long-eared bat) within a 2 km radius of the wider site, in addition to records of unidentified pipistrelle, *Myotis*, and long-eared bat species. The most recent records dated from 2016 and the nearest records were attributable to common pipistrelle, Leisler's bat, Natterer's bat, brown long-eared bat and a *Myotis* species, all located on site (within the wider Fort Halstead boundary).

The desk study also included a search for statutory nature conservation sites designated for bats within a 10 km radius of the site. Westerham Mines SSSI, which is designated for supporting hibernating bats, is located 6.93 km south-west of the QinetiQ site.

2.2 PREVIOUS SURVEYS

2007-2014 Surveys

During surveys completed by Waterman Group between 2007 and 2014, five buildings within the QinetiQ site (X15B, X50, X67, X76 and X77) were classed as having low potential to support roosting bats. The remaining buildings, including X78, were considered to offer negligible bat roosting potential. Further dusk emergence and dawn re-entry surveys confirmed the presence of roosting bats in ten buildings within the wider Fort Halstead site. None of the buildings within the QinetiQ site boundary were found to support a roost.

2018 Surveys

During the Preliminary Bat Roost Assessment (Report RT-MME-127947-02) of the wider Fort Halstead site, a total of 31 buildings within the QinetiQ site boundary were identified as having high potential to support roosting bats, and 32 buildings were identified as having low potential to support roosting bats. Building X78 was classed as having low potential to support roosting bats. Although multiple weep holes were present in the external walls of this building, these were inspected and mostly filled with cobwebs.

During the suite of Dusk Emergence and Dawn Re-Entry Surveys completed in 2018, no bat roosts were identified in any of the buildings within the QinetiQ site.

2.3 2020 PRELIMINARY BAT ROOST ASSESSMENT

A targeted Preliminary Bat Roost Assessment (Report RT-MME-150872-04 Rev B) of the buildings within the QinetiQ site was completed over two site visits in August 2020. A total of 36 buildings were classed as having high potential to support roosting bats, and 26 buildings were classed as having low potential to support roosting bats. Building X78 was upgraded to having high potential to support roosting bats. At the time of the survey, some of the weep holes were found to be clear of cobwebs, indicating potential use by fauna.

3. POTENTIAL IMPACTS ON BATS

3.1 SUMMARY OF PROPOSED WORKS

It is understood that the external face of the roof of Building X78 is to be re-coated. The weep holes located in the external walls (which provide the only feature suitable for access/use by roosting bats) are not expected to be impacted during the re-coating works.

3.2 POTENTIAL CONSTRUCTION PHASE IMPACTS

As Building X78 has high potential to support roosting bats, in the absence of mitigation, the re-coating works to the external face of the roof could result in the killing or injury of bats and/or the loss of roosts. Loss or disturbance of a bat roost would be in breach of the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended).

This installation of scaffolding could cover or obstruct potential entrance points for bats. There is also the potential for disturbance to roosting, foraging and commuting bats from lighting, should any be required during the works.

Mitigation measures associated with the above impacts are detailed in Chapter 4.

3.3 POTENTIAL OPERATIONAL PHASE IMPACTS

The weep holes located in the external walls of Building X78 which provide potential access points for roosting bats are proposed to be retained, and are anticipated to remain suitable for use once the re-coating works to the external face of the roof have been completed and the building is operational. No long-term impacts on bats are predicted as a result of the proposals.

4. BAT PROTECTION STRATEGY

4.1 AIMS AND OBJECTIVES

The objectives for the bat mitigation strategy are:

- Prevent killing or injury of bats, or destruction or disturbance of bat roosts;
- Ensure the favourable conservation status of bat populations at the site is maintained; and
- Minimise disturbance to bat foraging and commuting habitat.

If the proposed re-coating works to the external face of the roof of Building X78 are undertaken in line with the following measures, it is anticipated that works can commence without the need to obtain a Natural England Development Licence. It should be noted that the measures outlined here are for the re-coating works to external face of the roof only, and additional surveys will need to be undertaken if any other works to the building are required. The following approaches are recommended to ensure that the re-coating works to the external face of the roof proceed without any breaches in wildlife legislation.

4.2 TIMING OF WORKS

If any bat roosts are present within Building X78, they are considered most likely to be used by a low number of bats during the day in summer. It is considered unlikely that bats would utilise the building for hibernation during the winter months. The works should therefore be timed so that they are completed when bats are most likely to be absent from the building. The re-coating of the external face of the roof is scheduled to be completed during November and December 2021, therefore the likelihood of bats roosting within the building for hibernation purposes is considered to be low.

4.3 SUPERVISION AND ASSESSMENT OF POTENTIAL FEATURES

All works will be completed under the supervision of a licensed and experienced ecologist (the Ecological Clerk of Works).

The Ecological Clerk of Works will undertake an inspection of the weep holes using an endoscope immediately prior to the roof removal works. If no bats or evidence of bats are found, then works will commence under supervision.

4.4 DESIGN OF SCAFFOLDING

The timing of works to avoid impacts on bats should be sufficient to avoid any risk of harm or disturbance. Despite this, to ensure that there is no temporary loss of roosts during the works, the scaffolding will be erected in such a way so as to avoid any conflict with weep holes. The scaffolding will be located where it does not block the weep holes or obstruct them in any way.

4.5 CONSTRUCTION MATERIALS

A Delcote architectural roof coating product suitable for use on metal roofs is to be used to re-coat the face of the external roof. No adverse impacts upon bats are anticipated as a result of using this product.

4.6 TOOLBOX TALK

A 'toolbox talk' will be held with the roofing team before any works are undertaken to ensure that the contractors are aware of the potential bat issues associated with the building. It will be made clear that the building has the potential to support bats, and the 'toolbox talk' will discuss the adoption of appropriate methodologies to ensure that no harm to bats occurs.

4.7 UNEXPECTED BATS WITHIN BUILDING

In the unlikely event that any bats are identified during the works, all works will cease. The site will be re-assessed by the Ecological Clerk of Works and a decision will be made regarding the progression of the works. The Ecological Clerk of Works will ascertain if consultation with Natural England is required.

4.8 COMPLETION OF WORKS

Following the completion of the re-coating works to the external face of the roof, the Ecological Clerk of Works will inspect the building, including the weep holes, and confirm that these potential access points remain available to bats.

4.9 LIGHTING

No additional lighting, which may cause illumination to the roost entrances, will be installed on site during the re-coating works to the external face of the roof. Where lighting is required for health and safety/security reasons, it will be low level (i.e. installed at the ground level) and directional (i.e. downwards pointing and directed away from the roof). This will ensure that bats using the site to roost/forage/commute are not affected by illumination.

REFERENCES AND BIBLIOGRAPHY

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

Conservation of Habitats and Species Regulations, 2017.

English Nature (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Jones K & Walsh A (2001). *A Guide to British Bats*. Field Studies Council/The Mammal Society, London.

The Wildlife and Countryside Act, 1981 (as amended).

APPENDIX 1

LEGISLATION

Bats and the places they use for shelter or protection (i.e. roosts) receive legal protection under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

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

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1st January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The obligations of a competent authority in the 2017 Regulations for the protection of species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, or *obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CRoW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

The reader should refer to the original legislation for the definitive interpretation.

The following bat species are Species of Principal Importance for Nature Conservation in England: barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*. Species of Principal Importance for Nature Conservation in England are material considerations in the planning process. The list of species is derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006.

ECOLOGY

At present, 18 species of bats are known to live within the United Kingdom, of which 17 species are confirmed as breeding. All UK bat species are classed as insectivorous, feeding on a variety of invertebrates including midges, mosquitoes, lacewings, moths, beetles and small spiders.

Bats will roost within a variety of different roosting locations, included houses, farm buildings, churches, bridges, walls, trees, culverts, caves and tunnels. At different times of the year the bats roosting requirements alter and they can have different roosting locations for maternity roosts, mating roosts and hibernation roosts. Certain bat species will also change roosts throughout the bat activity season with the bat colony using the site to roost for a few days, abandoning the roost and then returning a few days or weeks later. This change can be for a variety of reasons including climatic conditions and prey availability. Bats are known live for several years and if the climatic conditions are unfavourable at a particular roost, they may abandon it for a number of years, before returning when conditions change. Due to the matriarchal nature of bat colonies, the locations of these roosts can be passed down through the generations.

Bats usually start to come out of hibernation in March and early April (weather dependent), when they start to forage and replenish the body weight lost during the hibernation period. The female bats then start to congregate together in maternity roosts prior to giving birth and a single baby is born in June or July. The female then works hard to feed her young so that they can become independent and of a sufficient weight to survive the winter before the weather gets too cold and invertebrate activity reduces. Males generally live solitary lives, or in small groups with other males, although in some species the males can be found living with the females all year. The mating season begins in the autumn. During the winter bats hibernate in safe locations which provide relatively constant conditions, although they may venture outside to forage on warmer winter nights.