MIDDLEMARCH

Dusk Emergence Bat Survey

Aldi, Watling Street, Hinckley

A Report To: Avison Young Ltd
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Middlemarch Environmental Ltd, Triumph House, Birmingham Road, Allesley, Coventry, CV5 9AZ
www.middlemarch.eco
Tel: 01676 525880

Quality Assurance

Date	Version	Author	Checked by	Approved by
07/07/2023	Interim	Dorothy Dunne MSc (Ecological Project Officer)	Carol Flaxman BSc (Hons) ACIEEM (Principal Ecological Consultant)	Carol Flaxman BSc (Hons) ACIEEM (Principal Ecological Consultant)

Declaration of Compliance

This study has been undertaken in accordance with British Standard 42020:2013 "Biodiversity, Code of Practice for Planning and Development". 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

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment. Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Validity of Data

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, it may be necessary to undertake an updated survey to allow any changes in the status of bats on site to be assessed, and to inform a review of the conclusions and recommendations made.

Non-Technical Summary

Project Background

In June 2023, Avison Young Ltd commissioned Middlemarch to undertake dusk emergence and dawn re-entry bat surveys at Aldi, Watling Street, Hinckley. These surveys are required to inform a planning application associated with the extension of the existing supermarket and car park. The current report is an interim report detailing the results of the first dusk emergence survey.

Scope of Survey

The supermarket building on site was classed as having high potential to support roosting bats and further surveys to determine the presence or absence of roosting bats were recommended. To date, a single dusk emergence survey has been carried out of the supermarket building on site.

This survey was conducted in line with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016). The aim of these surveys is to detect whether bats are roosting within the building, and to enable a profile of site utilisation by bats to be compiled.

The survey was undertaken, on 19th June 2023, by the following personnel: Dorothy Dunne MSc (Ecological Project Officer) and Amy Finnegan MSc, ACIEEM (Ecological Consultant).

Summary of Key Bat Features

The supermarket building was assessed as having high potential to support roosting bats, due to the minor gaps along the soffits and a significant gap at the apex. However, during this survey no bats were observed emerging from the building.
Very low levels of bat activity were recorded during the survey, namely a single common pipistrelle *Pipistrellus pipistellus* commuting along the western hedgerow.

Potential Impacts on Bats

The single survey completed to date did not identify any roosting bats associated with the building. However, two further surveys (a dusk emergence and dawn re-entry survey) will need to be carried out in accordance with survey guidelines.

Recommendations

R1 **Further dusk emergence and dawn re-entry surveys:** The building on site has been identified as having high potential to support roosting bats. In accordance with Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2016) two further surveys, in the form of a dusk emergence and dawn re-entry survey, should be undertaken during the bat emergence/re-entry survey season to determine the presence / absence of roosting bats within the building. The bat emergence/re-entry survey season extends from May to September.

R2 **Scheme Design:** The proposed development should be designed to minimise effects on bats in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG).

R3 **Lighting:** Any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species.

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1. Introduction

1.1 Project Background

In June 2023, Avison Young Ltd commissioned Middlemarch to undertake dusk emergence and dawn re-entry bat surveys at Aldi, Watling Street, Hinckley. These surveys are required to inform a planning application associated with the extension of the existing supermarket and car park.

Middlemarch has previously carried out a Preliminary Ecological Appraisal, Preliminary Bat Roost Assessment and Badger Survey for Avison Young Ltd at this site. The findings of these surveys are detailed in Report RT-MME-160472-04.

The Preliminary Bat Roost Assessment found the trees on site to be in good condition and have negligible potential to support roosting bats. The supermarket building on site was found to have minor gaps along the soffits on the eastern and western elevations. In addition, there was a gap at the northern apex and a gap leading to a cavity at the north-east corner of the building. Due to these features the building was assessed as having high potential to support roosting bats. The Bat Surveys for Professional Ecologists: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2016)[1] recommends that for structures with high bat roosting potential at least three dusk emergence and/or dawn re-entry surveys be undertaken during the bat emergence/re-entry survey season to determine the presence/absence of roosting bats.

Therefore, dusk emergence and dawn re-entry bat surveys were recommended. This report details the interim results of the first dusk emergence survey undertaken on 19th May 2023.

All UK bat species are legally protected species and they are capable of being material considerations in the planning process. A summary of the legislation protecting bats is included within Appendix 1.

1.2 Site Description and Context

Table 1.1 provides a brief summary of the site and its surroundings.

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

Attribute	Description
Location	Aldi, Watling Street, Hinckley
National Grid Reference	SP 3965 9332
Site Area (ha)	0.76
Topography	The site is located on flat ground.
Land Cover (on site)	The site is dominated by the built environment including a car park and supermarket building. A strip of semi-improved neutral grassland was located along the western and northern boundaries and a dry ditch was present along the edge of the grassland. Scattered trees and areas of ornamental planting were present around the existing car park. A ditch supporting water was located offsite at the south west corner.
Land Cover (site surrounds)	The wider landscape is comprised of arable fields and urban buildings. The site was adjacent to the north of the A5. The town of Nuneaton was located south-west of site and Hinckley to the north-east.

Table 1.1: Summary of Site and Surroundings

1.3 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 1.2.

Document / Drawing Number	Author
Existing Site Plan K22A02-P002A	STOAS Architects Ltd
Proposed Site Plan K22A02-P003A	STOAS Architects Ltd

Table 1.2: Documentation Provided by Client

2. Methods

2.1 Desk study

As part of the Preliminary Ecological Appraisal (Report RT-MME-160472-04) an ecological desk study was undertaken. The consultees for the desk study were:

- Natural England - MAGIC website for statutory conservation sites;
- Leicestershire and Rutland Environmental Records Centre; and,
- Warwickshire Biological Records Centre.

Middlemarch then assimilated and reviewed the desk study data provided by these organisations. Relevant bat data are discussed in Chapter 3. In compliance with the terms and conditions relating to its commercial use, the full desk study data are not provided within this report.

The desk study included a search for statutory nature conservation sites designated for bats within a 10 km radius of the site.

2.2 Field Survey

Overview

The building on site was classed as having high potential to support roosting bats. In line with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), three bat surveys will be carried out consisting of two dusk emergence bat surveys and one dawn re-entry bat survey. The aim of these surveys is to detect whether bats are roosting within the building, and to enable a profile of site utilisation by bats to be compiled. To date, the first dusk emergence survey has been completed.

The surveys were undertaken by the following personnel: Dorothy Dunne MSc (Ecological Project Officer) and Amy Finnegan MSc, ACIEEM (Ecological Consultant). The weather conditions recorded for the survey are presented in Table 2.1.

Type of Survey	Date	Time	Parameter			
			Temperature °C	Cloud %	Precipitation	Wind (Beaufort Scale)
Dusk	19-06-2023	Start	20	50	Dry	F1-2
		End	18	70	Dry	F1

Table 2.1: Weather Conditions During Field Surveys

Dusk Emergence Bat Survey

In line with the specifications detailed in Bat Surveys: Good Practice Guidelines (Collins, 2016), the dusk survey commenced 20 minutes prior to sunset and continued until 90-120 minutes after sunset.

Equipment and Analysis

The dusk emergence was conducted using electronic bat detectors (Echometer Touch 2) to facilitate the detection of bats and to aid in the determination of species of bat using the site. Subsequent computer analysis of sound recordings was used to facilitate the identification of bat

species/families present during the surveys. Some species of bats echolocate at similar frequencies and the characteristics of their calls can overlap, i.e. *Myotis* species, and calls can vary dependant on the environment that the bats are in. It is widely accepted that if there is any doubt identifying a bat to species level then identification to family level is satisfactory (Russ, 1999)[2]. If echolocation calls more closely resemble one species than another, then they will be assigned to species level based on the parameters set out in Russ (2012)[3] for guidance. Identification of overlapping species should, however, be interpreted with caution.

2.3 Constraints

There were no constraints experienced during the survey.

[2] Russ, J. (1999). *The Bats of Britain and Ireland. Echolocation calls, sound analysis, and species identification (1st Ed.).* Alana Ecology Ltd, London.
[3] Russ, J. (2012) *British Bat Calls: A Guide to Species Identification*. Pelagic Publishing, Exeter.

3. Desk Study

3.1 Statutory Nature Conservation Sites

The site is not located within 10 km of any statutory nature conservation sites designated for the presence of bats.

3.2 Species Records

The data search was carried out in May 2023 by Leicestershire and Rutland Environmental Records Centre and Warwickshire Biological Records Centre. Records of bat species within a 1 km radius of the survey area provided by the consultees are summarised in Table 3.1. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Common pipistrelle *Pipistrellus pipistrellus*	5	2018	Within site boundaries	-	ECH 4, WCA 5, WCA 6
Soprano pipistrelle *Pipistrellus pygmaeus*	2	2016	500 m west	✓	ECH 4, WCA 5, WCA 6
Unidentified bat *Chiroptera sp.*	2	2000	240 m south-west	#	#
Pipistrelle *Pipistrellus sp.*	1	2016	500 m west	#	ECH 4, WCA 5, WCA 6
Brown long-eared bat *Plecotus auritus*	1	2014	*	✓	ECH 4, WCA 5, WCA 6
Noctule *Nyctalus noctula*	1	2014	*	✓	ECH 4, WCA 5, WCA 6
Unidentified myotis *Myotis* sp.	1	2014	*	-	ECH 4, WCA 5, WCA 6

Key:
#: Dependent on species.
*: Potentially within a 1 km radius (grid reference provided was four figures only)
ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection.
WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds).
WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
Species of Principal Importance: Species of Principal Importance for Nature Conservation in England.

Table 3.1: Bat Species Records Within 1 km of Survey Area

4. Survey Results

4.1 Dusk Emergence Survey

The dusk emergence survey commenced 15 minutes prior to sunset and continued until 120 minutes after sunset. Sunset was at 21:32 hrs (BBC Weather Centre Data for Hinckley). One species of bat was recorded during the survey: common pipistrelle *Pipistrellus pipistrellus*. Survey results are plotted on Drawing C160815-01 in Chapter 7.

At 22:40 (68 minutes after sunset) a common pipistrelle was detected by the surveyor on the western elevation commuting along the hedgerow. There were no visual observations of this bat.

No other bat activity was observed or detected during the survey. Analysis of the sound recordings did not identify any further species of bat.

5. Impact Assessment

5.1 Summary of Proposals

The site proposals are to extend the existing supermarket building and will also include the expansion of the hardstanding car park to create additional parking bays. The removal of the existing hedgerow, some of the scattered trees, scrub and much of the grassland will be required to facilitate the proposed works. Repairs will also be made to the existing building including re-roofing, replacement of fascias and soffits, rendering brickwork and replacement of cladding to the shop front. The proposals are further detailed in the proposed plans (Proposed Site Plan K22A02-P003A).

5.2 Summary of Key Bat Features

Roosting Bats

During the dusk emergence survey completed to date, no roosting bats were observed emerging from the building.

Commuting/Foraging Bats

During the dusk emergence survey, very low levels of common pipistrelle activity were recorded, namely a single bat commuting along the western hedgerow.

5.3 Potential Impacts on Bats

To date, no roosting bats have been identified in the surveyed building. However, two further surveys (a dusk emergence and dawn re-entry survey) will need to be carried in accordance with survey guidelines. A recommendation concerning these further surveys has been included in Chapter 6.

Any new lighting, either temporary or permanent, at the site has the potential to impact foraging and commuting bats. Therefore, a recommendation regarding sensitive lighting is made in Chapter 6.

6. Recommendations

All recommendations provided in this section are based on Middlemarch's current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

R1 **Further dusk emergence and dawn re-entry surveys:** The building on site has been identified as having high potential to support roosting bats. In accordance with Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2016), two further surveys, in the form of a dusk emergence and dawn re-entry survey, should be undertaken during the bat emergence/re-entry survey season to determine the presence/absence of roosting bats within the structure. The bat emergence/re-entry survey season extends from May to September. At least one of these surveys should be undertaken during the peak season for emergence/re-entry surveys between May and August. If a roost is discovered during these surveys, a Natural England licence application may be required.

R2 **Scheme Design:** The proposed development should be designed to minimise effects on bats in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG). The mitigation hierarchy requires all development schemes to apply the following principles:

- *Avoidance and Mitigation* – the proposed development should seek to minimise losses of features with bat potential, in the first instance and incorporate these features in the landscaping layout of the scheme accordingly. Similarly, protection measures for retained features and surrounding habitats should be considered to prevent incidental damage or disturbance during the construction phases. These measures will help to reduce the likelihood of impacting bats and minimise losses of suitable bat roosts and habitat. Where significant harm cannot be wholly or partially avoided, adverse impacts should be minimised by design or through the use of effective mitigation measures such as minimising light spill (see below).
- *Compensation* – where unavoidable losses occur and mitigation cannot be provided, compensation for significant residual harm will be required as a last resort or planning permission could be refused. Where there is a significant effect on a bat roost, a compensation strategy sufficient to obtain a development licence from Natural England may also be required.

R3 **Lighting:** In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018[4]; Gunnell et al, 2012[5]), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species. Examples of good practice include:

- Avoiding the installation of new lighting in proximity to key ecological features, such as retained and proposed trees and hedgerows.

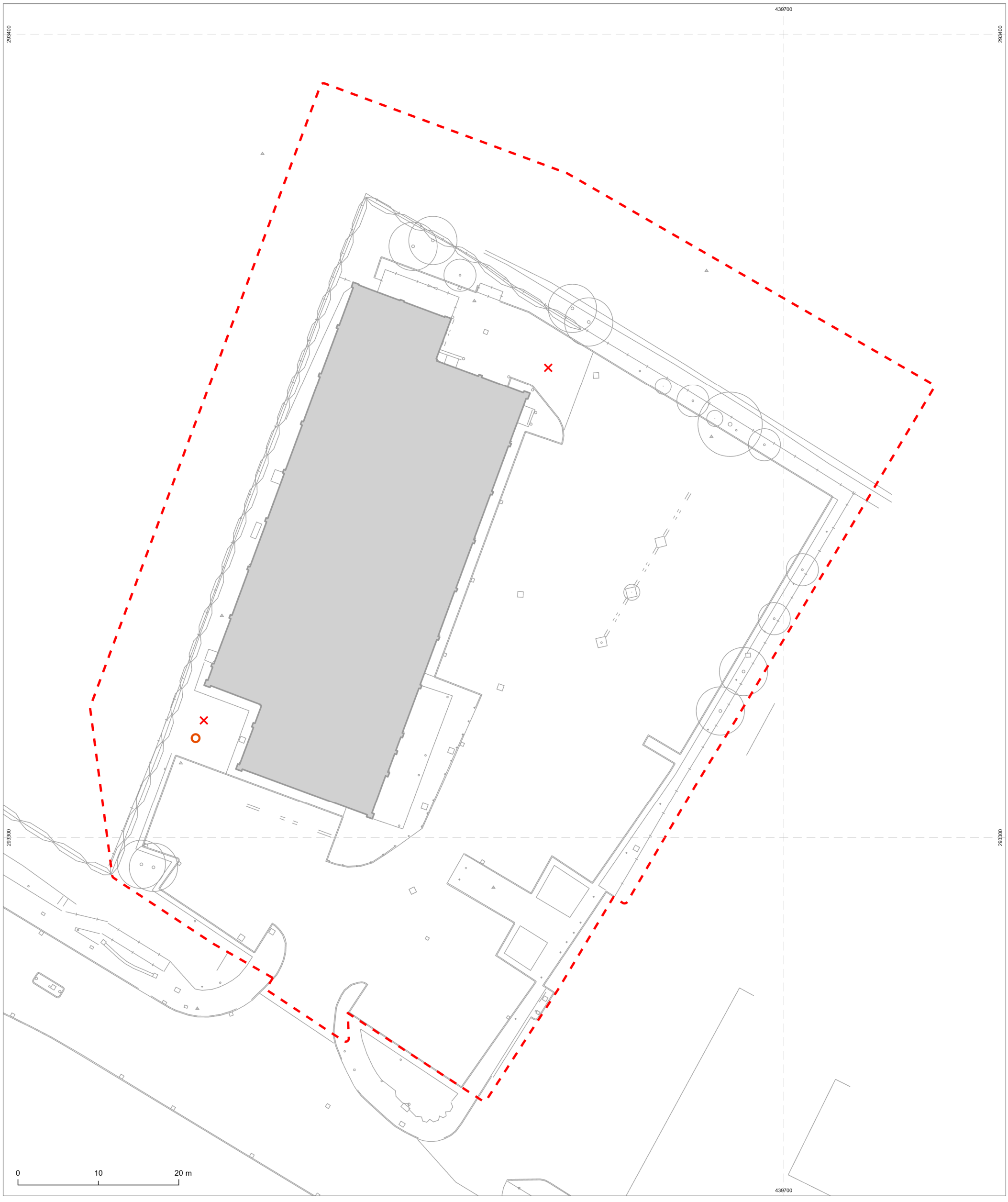
[4] Miles, J., Ferguson, J., Smith, N. and Fox, H. (2018) *Bats and artificial lighting in the UK. Bats and the Built Environment Series*. Bat Conservation Trust and Institution of Lighting Professionals

[5] Gunnell, K., Grant, G. and Williams, C. (2012) *Landscape and urban design for bats and biodiversity.* Bat Conservation Trust.

- Using modern LED fittings rather than metal halide or sodium fittings, as modern LEDs emit negligible UV radiation.
- The use of directional lighting to reduce light spill, e.g. by installing bespoke fittings or using hoods or shields. For example, downlighting can be used to illuminate features such as footpaths whilst reducing the horizontal and vertical spill of light.
- Where the use of bollard lighting is proposed, columns should be designed to reduce horizontal light spill.
- Implementing controls to ensure lighting is only active when needed, e.g. the use of timers or motion sensors.
- Use of floor surface materials with low reflective quality. This will ensure that bats using the site and surrounding area are not affected by reflected illumination.
- For internal lights, recessed light fittings cause significantly less glare than pendant type fittings. The use of low-glare glass may also be appropriate where internal lighting has the potential to influence sensitive ecological receptors.

7. Drawings

Drawing C160815-01 – First Dusk Emergence Survey



Legend

- Site boundary
- Surveyor location
- Common pipistrelle heard but not seen
- Building surveyed

N

Project	Aldi, Watling street
Drawing	Dusk Bat Survey Results - 19/06/2023
Client	Avison Young
Drawing Number: C160815-01	Revision: 00
Scale @ A3: 1:450	Date: June 2023
Approved By: DD	Drawn By: JR

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Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
T:01676 525880
E:admin@middlemarch-environmental.com

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C160815-01

Appendix 1

Relevant 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.