



ASHTON KEYNES AD FACILITY, WILTSHIRE

BAT NOCTURNAL SURVEYS REPORT

BMD.25.0155.RPE/P2.003.ECOLOGY&BAT
DATE: OCTOBER 2025



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Ashton Keynes AD Facility

October 2025

25.0155.RPE.P2.003.BatNocturnal

DOCUMENT HISTORY

Project Number: 25.0155		Document Reference: 25.0155.RPE.P2.003BatNocturnal			
Revision	Purpose of Issue	Originated	Technical Reviewed	Approved	Date
-	PLANNING	AG/NS	JW	JP	21.10.2025

Declaration of compliance with professional code of ethics or conduct

The information which we have prepared and provided 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 bonafide opinions.

All reasonable efforts have been made to comply with current legislation and best practice, including BS 42020:2013, the Environment Act 2021 (Schedule 7A: Biodiversity Gain), the National Planning Policy Framework (2025), CIEEM EclA Guidelines (2018, updated 2022), and relevant Natural England guidance.

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EXECUTIVE SUMMARY

Client Acorn Bioenergy
Consultant Bradley Murphy Design Ltd.

SITE

Location Ashton Keynes AD Facility, Wiltshire
National Grid Reference ... Approx. Centre: SU 03979 96156
Over-view The Site has an approximate area of 7 hectares and comprises two parcels of cereal cropland with associated peripheral and intersecting hedgerows and mature trees. The Site is accessed via Ashton Road, which is situated directly east of the Site, connecting South Cerney to Ashton Keynes.
Landscape context The surrounding landscape is dominated by arable fields and numerous large waterbodies and wetland habitats associated with Cotswolds Water Park. The nearest urban environment to the Site is South Cerney and Ashton Keynes. South Cerney is a village and civil parish located ~500 m northeast of the Site and falls under Wiltshire County. Ashton Keynes is a village located in the north of Wiltshire, approximately 1.9 km south of the Site. The closest linear urban feature is Ashton Road, but continuing further east is the A419, approximately 3.6 km from the Site boundaries.

DEVELOPMENT & PLANNING BACKGROUND

Proposed works The Construction and operation of an anaerobic digestion facility, ancillary infrastructure and the construction of a new access from Ashton Road, Ashton Keynes, Wiltshire.
Planning stage Full Planning Application (Wiltshire County Council planning application reference: PL/2023/03359).

ECOLOGICAL BACKGROUND

General A preliminary Ecological Appraisal has been previously undertaken for the Site by SLR Consulting Ltd in 2023. Further Phase II surveys and assessments were undertaken in 2023, including bat emergence surveys, a biodiversity net gain assessment of the Site, and an environmental assessment.

SURVEY

Objectives To provide baseline data pertaining to the likelihood of bat roosts being present in trees on Site and determine the types of roosts where present.
To inform the detailed planning applications and level of mitigation required to ensure favourable conservation status of bats at the site as a result of the proposed development.
Approach Two nocturnal bat (dusk emergence) surveys of trees T1 and T2 using surveyors and monitoring equipment (e.g. infrared cameras and handheld acoustic bat detectors). Tree locations are shown on BMD.25.0155.DRE.003.
Date July - August 2025
Results Bat surveys (emergence) conducted between July and August 2025 recorded five bat species, Common pipistrelles, Soprano Pipistrelles, Myotis sp., Serotine and Noctules. No emergences were observed from either tree. Key foraging areas included the line of trees adjacent to the Site and to the west of the Site. The site serves primarily as foraging and commuting habitat, with some roosting opportunities.
Conclusions The surveyed trees are expected to be pruned to improve visibility of the road from the access to the Site, requiring appropriate licensing and further surveys to determine current use by bats.

RECOMMENDATIONS

The surveys conducted on the trees located offsite to the south of the Site, T1 and tree T2, have established that the historical roost in T1 is a day roost and would therefore be eligible for a European Protected Species Mitigation Licence (EPSML) or a Low Impact Bat Licence (LIDL) that would be required prior to tree pruning works to ensure compliance with legal protections for bats. Prior to applying for a licence, the licence holder would be required to visit the roost. A precautionary approach is advised for all trees, including toolbox talks for contractors and pre-works inspections of potential roost features. To ensure minimal disturbance to the roosting bats, habitat creation measures should include the retention and enhancement of key foraging and commuting features such as lines of trees, hedgerows, and grassland. Additionally, artificial bat roosts should be installed, including incorporating bat boxes on retained trees, and habitat creation and enhancement of key ecological features used by bats. If works are delayed beyond 2026, further surveys may be necessary to reassess bat presence and inform mitigation strategies and any works to the trees.

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1. INTRODUCTION

1.1 Background Information

- 1.1.1 Bradley Murphy Design Ltd. (BMD) was commissioned by Acorn Bioenergy in June 2025 to undertake an Ecological Assessment of their site: Ashton Keynes AD Facility, hereafter referred to as 'the Site'. The Site is approximately centred on national grid reference: SU 03979 96156. A plan depicting the Site's location is provided in the Appendices.
- 1.1.2 The nocturnal bat surveys were originally recommended by SLR in 2023 following a Preliminary Ecological Appraisal and Initial Bat Assessment (Ref: 404.11923.00004) of the Site. Given the time elapsed since those surveys, updated assessments were advised to reconfirm the presence and status of any bat roosts.
- 1.1.3 SLR was also instructed to conduct bat surveys of three trees located outside of the development area, due to be removed for traffic visibility reasons. Their report concluded that:
- *"Tree 1 was identified as having high potential, Tree 2 as low potential and Tree 3 as negligible potential. Therefore, two bat emergence surveys and one re-entry survey were undertaken of Tree 1 on 27th July 2023, 10th August 2023 and 23rd August 2023 to identify the presence/likely absence of roosting bats.*
 - *During the surveys, three bats, comprising common and soprano pipistrelles, were observed emerging from the tree. The survey results therefore confirm the presence of two day roosts, comprising soprano and common pipistrelle, within Tree 1. As such, the tree should be included in a bat mitigation licence to facilitate felling.*
 - *To compensate for the loss of roosting opportunities resulting in the removal of the tree, two general purpose Woodcrete bat boxes should be installed on trees on site. This excludes any compensation bat boxes required for the bat mitigation licence, estimated as being one maternity suitable box to replace the lost roost and a further box added for each tree lost."*
- 1.1.4 Given that the previous bat surveys are over two years old, updated surveys are necessary to determine if Trees 1 and 2 are still suitable for bats, and if so, whether bats are actively roosting in them. Additionally, other trees located within and directly adjacent to the Site may include potential roosting features following the previous surveys conducted in 2023.
- 1.1.5 Following the surveys conducted by SLR in 2023, a Technical Note was prepared by Tyler Grange and submitted to the Council on the 17th November 2024. The Technical Note was created to following an updated assessment of the Site to determine if the habitats present had changed since the previous surveys in 2023, and confirm the validity of the conclusions drawn by the previous ES Chapter. Their report concluded that:
- "Based in the results of the updated 'Extended' Phase 1/UK Habs, GLTA and DBW surveys, it is concluded that that site has not significantly changed since the previous survey work in 2023. CIEEM guidance on the shelf life of ecological survey data states that over 12 months old can be considered valid if validated with a survey and there have been not significant changes in the baseline. As such, considering the baseline habitat recorded in 2023 are the same as those recorded in 2024, the conclusions and mitigation strategy*

informed by the previous survey work are considered valid for the purpose of considering the proposed development and no further update work is required.”

- 1.1.6 All previous documents and ecology reports associated with the Site (as detailed above) have been reviewed in full, and their findings have been used to inform the current assessment.
- 1.1.7 This report presents the approach, results and evaluation of the bat surveys undertaken at the Site in order to determine the value and use of the Site by bats. The data will further inform the detailed planning applications and level of mitigation required to ensure the favourable conservation status of bats at the Site is maintained as a result of the proposed development. The data will also inform any necessary European Protected Species Licence applications.

1.2 Proposed Development

- 1.2.1 The Construction and operation of an anaerobic digestion facility, ancillary infrastructure and the construction of a new access from Ashton Road, Ashton Keynes, Wiltshire.

1.3 Site Context

Historic Context

- 1.3.1 A review of readily available aerial images indicates there have been no significant changes to the Site itself in the past 30 years. The Site has not undergone any significant change in the past century, and has remained as grassland parcels, with field boundaries and roads adjacent to the eastern and western boundaries consistent with present day. The surrounding landscape has undergone significant change in the past several decades, beginning in the 1960's with the formation of nearby water bodies, lakes and ponds associated with the Cotswold Water Park, beginning as a result of quarrying in the area. The wider landscape has undergone little change in the past 30 years and has remained primarily an agricultural mosaic, with some residential and commercial developments existing to the northeast and southeast since at least the mid 20th century, and a cemetery to the southwest existing since the 1940's. The nearby village of South Cerney situated northeast of the site has undergone some expansion in the way of residential development extending in the direction of the Site in the past 5 years.

Present Context

- 1.3.2 The site consists of two hedgerow lined field parcels of agricultural use, chiefly arable, whereby both fields are not entirely encompassed by the proposed Site boundary. The Site is approximately 7 ha in size, located in the North of Wiltshire close to the Gloucestershire boundary, and is centred between National Grid Coordinates of SU 03979 96156. The Site is approximately 1.9km north of Ashton Keynes.
- 1.3.3 The site comprises of arable land, with 1 full field as well as a northern parcel of the bordering southern field. The Site boundary is lined with hedgerows and mature trees and is situated on Ashton Down. The Site has borders arable land with Ashton Road running North to South along its eastern border. Aggregate Industries concrete works is located ~270m southeast of the Site, bordering one of the many nearby water bodies associated with the Cotswold Water Park. The

Cotswold Water Park and its associated water bodies are located as close as ~500m northeast and ~600m south of the Site.

- 1.3.4 The Site is accessed by Ashton Road which borders the east of the site, running north to south. The Site is surrounded by hedgerows and low trees and is split by an intermittent hedgerow that divides the complete northern field and the southern parcel, located within the Site. The Site is surrounded by open flat arable land with the exception to the southeast where a lake associated with the Cotswold Water Park and Whitefriars Sailing Club is located.
- 1.3.5 The surrounding land is dominated by arable fields which surround both the Site and Cotswold Water Park. The nearest urban environment to the Site is South Cerney and Ashton Keynes. South Cerney is a village and civil parish located ~500m northeast of the Site and falls under Gloucestershire County. Ashton Keynes is a village located in the north of Wiltshire, approximately 1.9km south of the Site. The closest linear feature is the Ashton Road but continuing further east is the A419, approximately 3.6km from the site boundaries.
- 1.3.6 The neighbouring fields of the Site are chiefly arable with linking hedgerows and woodland blocks can be found throughout these areas.

Roosts and species overview

- 1.3.7 The initial bat assessment of the Site identified a number of features that could be used by bats for roosting. Different species of bat have different roosting preferences; Table 1.1 provides a summary of bats that have potential to occur in the location of the Site and the roost locations they are typically associated with.

Table 1.1 Summary of roosting preferences of bat species that have potential to occur on Site based on their geographical range and desk study completed (adapted from Collins, 2023).

Bat species	Summer roosts				Winter roosts			
	Trees	House/ buildings	Barn-type buildings	Bat boxes	Caves/ mines	Buildings	Walls/ cavity	Trees
Barbastelle								
Bechstein's								
Brandt's/ Whiskered								
Brown-long-eared								
Common/ soprano pipistrelle								
Daubenton's								
Greater Horseshoe								
Leisler's								
Lesser Horseshoe								

Bat species	Summer roosts				Winter roosts			
	Trees	House/ buildings	Barn-type buildings	Bat boxes	Caves/ mines	Buildings	Walls/ cavity	Trees
Nathusius' pipistrelle								
Natterer's								
Noctule								
Serotine								
Notes		Primary locations						
		Secondary locations, i.e. only sometimes found in such locations						

1.4 Compliance with National Policy and Legislation

- 1.4.1 A summary of national planning policy and wildlife legislation relating to development projects and bats in England is provided in Appendix A. The protocols, evaluations and recommendations contained within this report were made in accordance with these policies and legislation.

2. APPROACH

2.1 Introduction

- 2.1.1 This report has been produced with reference to current guidelines for bat surveys (Collins, 2023). Reference was also made to BS42020:2013: Biodiversity – Code of Practice for Planning and Development.
- 2.1.2 Full survey methodologies are provided in Appendix B and summarised below. Details of dates, surveyors, weather conditions and a review of survey limitations are provided in Appendix C. Definitions of technical terms used in this report are provided in the Glossary in Section 8. Common names of species are used throughout the report with scientific names provided in Section 8.3.

2.2 Dusk Emergence Survey Method 2025

- 2.2.1 Nocturnal bat surveys were undertaken on trees T1 and T2. These trees were identified during the initial assessments as having potential roosting features. Previous surveys have confirmed tree T1 to be a confirmed roost (SLR Ref: 404.11923.00004). A full review of the trees on Site is detailed in the previous Ecological Preliminary Ecological Assessment Report BMD.25.0155.RPE-P1.001.Ecology & Bat. Location of trees, cameras, and audio detectors are shown on BMD.25.0155.DRE.003.
- 2.2.2 The survey enabled the following questions to be answered:
- Are bats present or what is the likelihood of bats being present;
 - What bat species use the Site;
 - What is their level of activity; and,
 - How are they using the Site.
- 2.2.3 The surveys were conducted in line with current best practice and professional judgement: both trees T1 and T2 were surveyed twice across two visits.
- 2.2.4 Although tree T1 was assessed as having high roosting potential during the initial bat assessment, the emergence survey effort — comprising two surveys — is considered proportionate and appropriate. This conclusion is based on the fact that a historical roost has already been confirmed, and the survey effort was to confirm that there is still the presence of a day roost and to confirm the presence or absence of a maternity roost.
- 2.2.5 The emergence surveys were conducted between July and August 2025 to detect maternity colonies, males and non-breeding females in summer roosts, and transitional and mating roosts (Collins, 2023).
- 2.2.6 The dusk emergence survey commenced approximately 15 minutes before sunset and continued up to approximately 1.75 hours after sunset. The surveys were carried out across 2 dates between July and August:

- Survey 1: 30th July 2025: 20:45 - 22:45 hrs (sunset 20:59 hrs BST as recorded on <http://www.metoffice.gov.uk/>);
- Survey 2: 27th August 2025: 19:50 – 21:50 hrs (sunset 20:05 hrs BST as recorded on <http://www.metoffice.gov.uk/>); and,

2.3 Limitations

- 2.3.1 A summary of all limitations considered is provided in Appendix C.
- 2.3.2 The eastern elevation of both trees T1 and T2 could not be recorded due to the only accessible points being on a road.
- 2.3.3 Weather and seasonal conditions can influence bat behaviour during surveys; these are detailed in the survey conditions and metadata; Appendix C.

3. RESULTS

Survey 1 – 30th July 2025

3.1.1 Two surveyors and remote cameras were positioned around trees T1 and T2 at the following locations to ensure all key features identified during the initial bat assessment were covered:

- Position 1 (W3W ///armful.newsstand.lists) – a camera was directed southeast, focused on the northwestern aspect of tree T1 (Photograph 1), and an Echo Meter Touch 2 audio device was also positioned at this location;
- Position 2 (W3W ///extra.imposes.shirtless) - a camera was directed northeast, focused on the southwestern aspect of tree T1 (Photograph 2);
- Position 3 (W3W ///played.plantings.enhances) – a camera was directed southeast, focused on the northwest aspect of tree T2 where it is ivy clad (Photograph 3);

3.1.2 A plan depicting these positions is shown in the Appendix (drawing BMD.25.0155.DRE.003).

3.1.3 Table 3.1 summarises the bat activity during the survey.

Table 3.1 Bat activity recorded on 30/07/2025 on Site

Date: 30/07/2025	Site: Ashton Keynes AD Facility	Location: Wiltshire
Sunset: 20:59	Weather: 40% cloud cover, F1 east (Beaufort scale).	
Temp at start: 20°	Temp at end: 18°	Insects flying: Yes
Camera/Audio Recording Start: 20:45		
Survey Time: 20:45 – 22:45		
Surveyor 1 – Position 2		
Time	Species	Notes
21:28	Soprano pipistrelle	1 x Soprano pipistrelle foraging.
21:30	Soprano pipistrelle	1 x Soprano pipistrelle foraging.
21:33	Soprano pipistrelle	1 x Soprano pipistrelle heard not seen.
21:33	Noctule	1 x Noctule heard not seen.
21:37	Noctule	1 x Noctule heard not seen.
21:38	Noctule	1x Noctule heard not seen.
21:41	Soprano pipistrelle	1x Soprano pipistrelle heard not seen.
21:42	Common pipistrelle	1x Common pipistrelle foraging.
21:42	Noctule	1x Noctule heard not seen.
21:44	Noctule	1x Noctule heard not seen.
21:45	Soprano pipistrelle	1 x Soprano pipistrelle heard not seen.
21:47	Noctule	1x Noctule heard not seen.
21:49	Noctule	1x Noctule heard not seen.
21:50	Common pipistrelle	1x Common pipistrelle heard not seen
21:51	Soprano pipistrelle	1x Soprano pipistrelle heard not seen
21:52	Soprano pipistrelle	1x Soprano pipistrelle heard not seen

21:53	Soprano pipistrelle	1x Soprano pipistrelle heard not seen
21:55	Soprano pipistrelle	2x Soprano pipistrelle foraging
21:55	Common pipistrelle	1x Common pipistrelle heard not seen
21:58	Soprano pipistrelle	1x Soprano pipistrelle heard not seen
21:59	Common pipistrelle	1x Common pipistrelle heard not seen
22:02	Common pipistrelle	1x Common pipistrelle heard not seen
22:03	Common pipistrelle	Common pipistrelle heard not seen, heard 3x calls
22:06	Soprano pipistrelle	1x Soprano pipistrelle, heard not seen
22:06	Serotine	1x Serotine heard not seen
22:08	Soprano pipistrelle and Noctule	1x Soprano pipistrelle and Noctule, heard not seen
22:11	Serotine	1x Serotine, heard not seen
22:19	Serotine	1x Serotine, heard not seen
22:21	Common pipistrelle	1x Common pipistrelle, heard not seen
22:22	Soprano pipistrelle	1x Soprano pipistrelle, heard not seen
22:23	Serotine	1x Serotine, heard not seen
22:24	Common and soprano pipistrelle	1x Common and soprano pipistrelle, heard not seen
22:29	Soprano pipistrelle	1x Soprano pipistrelle, heard not seen
22:32	Myotis sp.	1x Myotis sp., heard not seen
22:38	Common pipistrelle	1x Common pipistrelle, heard not seen
22:40	Common pipistrelle	1x Common pipistrelle, heard not seen
Surveyor 2 – Position 3		
21:30	Noctule	HNS
21:36	Noctule	HNS
21:39	Common pipistrelle	HNS
21:40	Soprano pipistrelle	HNS
21:41	Soprano pipistrelle	HNS
21:42	Noctule	HNS
21:47	Noctule	HNS
21:49	Noctule	HNS
21:50	Common pipistrelle	HNS
21:52	Soprano pipistrelle	Seen heading north
21:53	Soprano pipistrelle	X2 seen, both heading north
21:55	Soprano pipistrelle	Seen commuting north
21:58	Soprano pipistrelle	HNS
22:02	Soprano pipistrelle and common pipistrelle	HNS
22:03	Soprano pipistrelle	HNS
22:05	Soprano pipistrelle	HNS
22:06	Soprano pipistrelle, common pipistrelle, noctule	HNS

22:08	Common pipistrelle and noctule	HNS
22:11	Noctule	HNS
22:16	Soprano pipistrelle	HNS
22:16	Serotine and common pipistrelle	HNS
22:18	Soprano pipistrelle	HNS
22:19	Noctule and common pipistrelle	HNS
22:39	Soprano pipistrelle	HNS
22:41	Soprano pipistrelle	HNS

- 3.1.4 During the survey, five species of bats were recorded by the audio detectors: Common pipistrelle, Soprano pipistrelle, Serotine, Myotis sp. and Noctule. There were no emergences recorded during the survey.
- 3.1.5 Position 1: 1 bat passing was recorded on the remote camera during the survey at approximately 22:05. The bat was flying to the north.
- 3.1.6 Position 2: Two bat passes were recorded heading north at approximately 21:53-21:55. The associated audio detector recorded one Soprano pipistrelle pass at 21:53 and 21:55. One bat pass was recorded heading south at approximately 21:55. The associated audio detector recorded a common pipistrelle at 21:55. One bat pass was recorded heading north at approximately 21:58. The associated audio detector recorded a soprano pipistrelle at 21:58.
- 3.1.7 Position 3: Two bat passes were recorded heading west at approximately 21:20 – 21:25. A bat made two passes across the camera screen towards the north at approximately 21:53. The associated audio detector recorded two soprano pipistrelle calls at 21:53 heading north. There was one bat seen passing the screen at approximately 21:55 to the north. The associated audio detector recorded a soprano pipistrelle call at 21:55.
- 3.1.8 No emergences were recorded at any position.
- 3.1.9 Initial sightings of Soprano pipistrelle bats were noted 45 minutes after sunset, which is slightly later than the mean emergence time for this species but still falls within the standard deviation. The highest levels of activity across the survey were associated with T1 and the line of trees adjacent to the Site, possibly due to the ample foraging and commuting opportunities they provide.
- 3.1.10 These observations indicate that the Site is used primarily for commuting and foraging by five bat species.

Survey 2 – 27th August 2025

- 3.1.11 Two surveyors and remote cameras were positioned around trees T1 and T2 at the following locations to ensure all key features identified during the initial bat assessment were covered:
- Position 1 (W3W ///armful.newsstand.lists) – a camera was directed southeast, focused on the northwestern aspect of tree T1 (Photograph 1), and an Echo Meter Touch 2 audio device was also positioned at this location;

- Position 2 (W3W ///extra.imposes.shirtless) - a camera was directed northeast, focused on the southwestern aspect of tree T1 (Photograph 2);
- Position 3 (W3W ///played.plantings.enhances) – a camera was directed southeast, focused on the northwest aspect of tree T2 where it is ivy clad (Photograph 3);

3.1.12 A plan depicting these positions is shown in the Appendix (drawing BMD.25.0155.DRE.003).

3.1.13 Table 3.2 summarises the bat activity during the survey.

Table 3.2 Bat activity recorded on 27/08/2025 on Site

Date: 27/08/2025	Site: Ashton Keynes AD Facility	Location: Wiltshire
Sunset: 20:05	Weather: Twilight, clear visibility throughout.	
Temp at start: 16°C	Temp at end: 14°C	Insects flying: Yes
Camera/Audio Recording Start: 19:50		
Survey Time: 19:50 – 21:50		
Surveyor 1 – Position 2		
Time	Species	Notes
20:31	Noctule	HNS
20:37	Soprano pipistrelle	Commuting west
20:40	Noctule	HNS
20:42	Common pipistrelle	Commuting east to west
20:51	Soprano pipistrelle	HNS
20:58	Common pipistrelle	Foraging to the east of the tree heading east.
20:59	Soprano pipistrelle	HNS
21:06	Common pipistrelle	HNS
21:17	Soprano pipistrelle	Commuting east
21:24	Common pipistrelle	HNS
21:25	Noctule	HNS
21:30	Soprano pipistrelle and myotis sp.	HNS
21:33	Soprano pipistrelle	HNS
Surveyor 2 – Position 3		
Time	Species	Notes
20:31	Noctule	HNS
20:33	Noctule	HNS
20:39	Noctule	HNS
20:41	Soprano pipistrelle	HNS
20:43	Noctule	HNS
20:48	Soprano pipistrelle	HNS
20:50	Soprano pipistrelle	HNS
20:52	Soprano pipistrelle	HNS
20:54	Soprano pipistrelle	HNS
20:57	Soprano pipistrelle	HNS
21:00	Common pipistrelle	HNS
21:02	Common pipistrelle	HNS
21:04	Soprano pipistrelle	HNS
21:06	Soprano pipistrelle	HNS
21:17	Soprano pipistrelle	HNS
21:19	Noctule	HNS
21:20	Common pipistrelle	HNS
21:23	Common pipistrelle	HNS, x2 calls

21:28	Common pipistrelle	HNS
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- 3.1.14 During the survey, only Common and soprano pipistrelles, noctules and a myotis sp. were identified by the audio detector. There were no emergences from the trees recorded by the remote cameras.
- 3.1.15 Position 1: no bats were recorded on the video footage, however the associated audio detector recorded Common pipistrelle, soprano pipistrelle, noctule and myotis sp. calls between 20:31 and 21:33 with a total of 13 calls recorded between these times.
- 3.1.16 Position 2: no bats were recorded on the video footage, however the associated audio detector recorded Common pipistrelle, soprano pipistrelle, noctule and myotis sp. calls between 20:31 and 21:33 with a total of 13 calls recorded between these times.
- 3.1.17 Position 3: one bat was recorded on the video footage passing T2 at approximately 20:43, flying from the north towards the south. The associated audio detector recorded Common pipistrelle, soprano pipistrelle and noctule calls between 20:31 and 21:28 with a total of 19 calls recorded between these times.
- 3.1.18 Consistent with the previous survey, multiple Common pipistrelles, Soprano pipistrelles and Noctule bats were observed foraging along line of trees that both T1 and T2 fall in and the other line of trees parallel to Site's eastern border. There were no Serotine calls noted during this call and only one myotis species was recorded. Bat activity was highest at these locations during the previous survey. This survey exhibited the lowest amount of bat activity across all surveys carried out.

4. EVALUATION

4.1 Introduction

- 4.1.1 This section summarises the evidence to date in response to the four elements of the objectives of the current study pertaining to bat activity.

4.2 Are bats present / what is the likelihood of bats being present?

- 4.2.1 Bats were observed and recorded foraging and commuting throughout the Site during emergence dusk surveys, confirming regular use of the available habitats.
- 4.2.2 T1 had a previously confirmed Common pipistrelle and a Soprano pipistrelle day roost, as per the survey results from SLR in July and August 2023 (SLR Ref: 404.11923.00004).
- 4.2.3 The updated surveys done between July and August 2025 had no confirmed emergences, however, bats will often have multiple day roosts, so this does not confirm the absence of roosting bats. However, it would suggest the absence of the tree being used as a maternity roost, as June – August is the optimal time to survey for a maternity roost. A suitable potential roosting features that could be utilised by roosting bats is a rot hole on the western aspect of the tree, which would provide suitable crevice roosting opportunities that Pipistrelle species prefer. There are thick ivy stems covering the trunk of both T1 and T2 which could be utilised for opportunistic roosting, along with ivy itself. The combination of these factors—including previous emergences from T1, early foraging behaviour, and the availability of multiple roosting opportunities—strongly indicates a high likelihood of additional roosting bats within other trees within or near to the Site.

4.3 What bat species use the Site?

- 4.3.1 The following species were recorded during the surveys:
- Common pipistrelle;
 - Soprano pipistrelle;
 - Noctule;
 - Serotine and;
 - Myotis sp.

4.4 What is their level of activity?

- 4.4.1 Across both emergence surveys, bat activity was observed during each visit at various locations, primarily consisting of foraging and commuting behaviour by five bat species, Common pipistrelle, Soprano pipistrelle, Noctule, Serotine and Myotis sp.
- 4.4.2 Moderate levels of activity from common bat species such as Common pipistrelles, Soprano pipistrelle and Noctules were recorded during the surveys. These bat species were regularly seen and heard foraging in areas of suitable habitat such as the line of trees and hedgerows lining the Site boundaries. Common and Soprano pipistrelles, in particular, had the highest

number of bat species across each of the surveys conducted, and this is likely due to their common abundance and the Site's proximity to the rural areas surrounding the Site.

- 4.4.3 There were occasional Serotine calls during the survey conducted in July but were not picked up on in August. A myotis species was heard calling once in July and once in August. It is likely that they were using the Site to commute to other foraging spaces.

4.5 How are they using the site?

- 4.5.1 No emergences were recorded during the two emergence surveys conducted on the 30th July 2025 or the 27th August 2025. However, T1 is a confirmed historical roost for both Common pipistrelles and Soprano pipistrelles. It is likely they are using potential roosting features on T1 such as a rot hole on one of the western facing branches and ivy cladding for opportunistic and it is unlikely that T1 is being used for maternity roosting.
- 4.5.2 Cameras positioned around tree T2 suggest that the tree is not being used as a roosting site, as no emergences from any of the identified features were noted. The majority of bat passes recorded by the remote camera and surveyor were of bats passing overhead, in the direction of either north or south.
- 4.5.3 On both surveys, cameras positioned around tree T1 and T2 noted passes indicative of foraging activity, particularly above the tree lines, suggesting these are both regularly used foraging grounds.
- 4.5.4 The highest levels of bat activity were generally associated with the line of trees adjacent to the Site and off of the main road. Activity levels varied across surveys and were partially influenced by weather conditions like wind and rain. The surveys indicate the site is primarily used for commuting and foraging. Temporary roosts are often utilised by bats when they are transitioning between more permanent roosts or when conditions in their usual roosts become unsuitable, such as due to disturbances or unfavourable environmental conditions. Thus, both trees could have been utilised for opportunistic roosting, as confirmed by the historical roost status.
- 4.5.5 Common and Soprano pipistrelles were the most common species identified throughout the survey period. Bat activity fluctuated throughout the survey period, with generally higher levels recorded on survey 1.

5. CONCLUSIONS

5.1 2025 Survey Results

- 5.1.1 The nocturnal surveys on 30 July and 27 August 2025 recorded bat activity typical of a well-connected arable landscape with treelines: common and soprano pipistrelle were the most frequent, with additional registrations of noctule, serotine and *Myotis* sp. Activity was concentrated along the treeline including around T1; however, no bat emergences were observed from T1 or T2 during either visit, indicating that a maternity roost was not present during the 2025 survey window.
- 5.1.2 Tree **T1** remains of particular importance. Previous survey work, conducted on the 27th July 2023, 10th August 2023 and 23rd August 2023, has **confirmed T1 as a day roost** used by common and soprano pipistrelles (SLR Ref: 404.11923.00004). While the 2025 dusk surveys did not record emergences, roost status is not negated by a single season's absence of emergence and roosts are legally protected whether or not bats are present at the time of works. Accordingly, T1 should be treated as a **confirmed day roost**, and any works that risk damaging, destroying or disturbing roost features (e.g., pruning that affects potential roost features/PRFs) must be undertaken under licence.
- 5.1.3 In the updated surveys conducted in 2025, it was confirmed that no maternity roosts were present. This conclusion was drawn from the absence of bat emergences during the peak months, limited swarming activity around the tree, and a lack of black staining around key roost features such as the rot hole on a southwest branch. Additionally, the ivy cladding was identified in previous surveys as the potential roosting feature in which the common and soprano pipistrelles emerged from, which further diminishes the likelihood of this location serving as a maternity roost, given that it is unsuitable to house significant bat populations and unable to provide the stable temperatures necessary for maternity roosting. Therefore, tree T1 was established to be most likely used as a day roost by individual common and soprano pipistrelles, which aligns with their typical ecology for day roosting as they are widespread and generalist crevice-dwellers.
- 5.1.4 Although eastern aspects of the trees could not be directly observed due to highway safety constraints, the overall survey effort, detections pattern and lack of emergences support the conclusion above; any residual uncertainty will be addressed through the licensing process, which typically requires updated pre-works survey/inspection to confirm current use at the time of works. If works are delayed beyond 2026, repeat bat checks should be undertaken to ensure decisions are based on current evidence.
- 5.1.5 Given the quality of evidence, previous confirmation of day roost status, and ecological suitability of the structure, this roost should be treated as a confirmed day roost under the definitions set out by Collins (2023). As such, any pruning or significant alteration to tree T1 or works within the zone of influence must proceed under the terms of a European Protected Species Mitigation Licence (EPSML) or a Low Impact Bat Licence (LIDL) if the eligibility criteria is met (e.g. small numbers of common species and low conservation significance of impact) issued by Natural England. The roost classification and its legal protection trigger the need for appropriate mitigation and compensation, including sensitive timing of works, supervision by a licensed bat

ecologist during pruning works and provision of replacement roosting features such as bat boxes or artificial potential roosting features. The presence of a confirmed roost underscores the ecological importance of the tree adjacent to the Site and its role in supporting the local bat population.

- 5.1.6 A precautionary approach should be adopted for all other trees where works are planned to ensure compliance with legislation and to safeguard bat populations. Given the confirmed presence of roosting bats in tree T1 a method statement must be prepared alongside the appropriate mitigation licence to minimise potential impacts. This should include toolbox talks for contractors and pre-works inspections of potential roost features.
- 5.1.7 The zone of influence is the geographical area surrounding a bat roost where development can significantly affect the bat population by disturbing their roosting, commuting and foraging spots. It is essential the method statement alongside the license will take into account the zone of influence when mitigating the ongoing works. Moderate levels of bat activity were recorded across the surveying Site. Common and widespread species such as Common pipistrelle, Soprano pipistrelle, Noctule, Serotine and Myotis sp. were detected. Key foraging and commuting habitats were typically associated with the line of trees on both sides of the road adjacent to the Site. The hedgerows and other lines of trees on and adjacent to the Site are also likely to be used for the same purpose. Therefore, during both construction and operation, carefully designed lighting schemes should be implemented to minimise disturbance to bats. With the licensing and mitigation strategies in place, it is estimated that the proposed works will have a negligible effect on bats and the favourable conservation status of local bat populations will be maintained.
- 5.1.8 In summary, the site offers a range of important habitats for bats, including roosting opportunities, foraging grounds, and commuting routes. The presence of multiple species, including roost sites, highlights the site's ecological value for local bat populations.

6. RECOMMENDATIONS

- 6.1.1 Prior to any pruning work, implement mitigation measures to protect the bats that may use the site. These measures should include:
- **Timing of Work:** Schedule construction or pruning activities outside of the peak bat activity season (May to September) to minimise disturbance.
 - **Roost Replacement:** If any potential roosts are identified during development, consider installing bat boxes or creating alternative roosting sites nearby to compensate for any loss of habitat.
 - **Lighting Management:** Limit artificial lighting during construction and in the final development to reduce potential disturbance to bats, particularly around known and/or potential roosting areas.
- 6.1.2 **Licensing:** A European Protected Species Licence (EPSML) or LICL will be required from Natural England before any works affecting bat roosts can proceed. The licensing process will involve updated bat surveys within the current season of works to confirm the current status of roosts within the affected trees, as bat occupancy may change over time. These surveys will inform the mitigation and compensation measures necessary to maintain the favourable conservation status of bats on Site.
- 6.1.3 As part of the licensing requirements, a detailed method statement must be prepared outlining how works will be undertaken to minimise harm to bats. This will include timing restrictions, ensuring pruning activities are carried out outside peak bat activity periods (May to September) wherever possible.
- 6.1.4 Additionally, the licence will set out compensatory measures to replace lost roosting opportunities. These may include bat boxes, man-made potential roosting features being cut into adjacent trees or the integration of roosting features into the new development. Habitat enhancement measures, such as the retention of key commuting and foraging corridors and restrictions on artificial lighting near roosting areas, will also be incorporated into the licence conditions.
- 6.1.5 Finally, the licence may require post-development monitoring to assess the effectiveness of mitigation measures and ensure that bats continue to utilise the Site. This monitoring, carried out by a Licensed Bat Ecologist, will help confirm that the Site remains suitable for bats following the completion of works.
- **Habitat Enhancement:** Consider enhancing areas of greater habitat to support foraging and commuting bats. This could involve planting native vegetation, maintaining existing trees and hedgerows, and ensuring connectivity between green spaces to encourage bat activity.
- 6.1.6 In addition to the retention and enhancement of existing features, it is recommended that habitat connectivity is strengthened across the Site. This could be achieved by planting new native hedgerows, reinforcing existing ones, or ensuring that newly installed bat boxes are located in proximity to known foraging areas and flight lines. These measures will support long-term habitat suitability for bats by promoting uninterrupted movement corridors between roosting and feeding areas.

- 6.1.7 Additional measures include a precautionary approach for any works associated with other trees on Site:
- Immediately prior to works commencing:
 - Toolbox talk for site operatives on bats and legal responsibilities. (Purpose: to ensure on-site workers are aware of the likely possibility of individual bats and what to do should they find one during the works. To ensure the works and workers do not breach current legislation)
 - Inspection of potential roost features where possible to identify any bats, if present, utilising the features.
 - Soft strip of the potential roost features prior to works as required.
 - If bats or evidence of bats are found at any stage:
 - All works **MUST** stop and not re-commence until advice has been received from an appropriately qualified ecologist.
 - Liaison with Natural England may be necessary.
- 6.1.8 In addition, the following best practice recommendations are made in relation to the works:
- Avoid significant increase, compared with current baseline, in external light and minimize noise, light and vibrations during and post-development.
 - Avoid additional light along the edges of the Site during and post-construction.
 - No new columns of light along corridor edges.
 - Keep light spill on key hedgerows and tree lines at or below 0.4 lux.
 - Any lights introduced should be warm where possible.
 - Lights should have curfews to limit light during the peak activity times for bats.
 - Directional fittings should be fitted where possible to minimize glare on essential habitat features.
 - Adhere to former Pollution Prevention Guidelines (PPG) (or more recent guidance where available), in particular PPG1 Basic good environmental practices; PPG3 Use and design of oil separators in surface water drainage systems; PPG6 construction and demolition sites.
- 6.1.9 The following opportunities for enhancement and biodiversity gain are recommended:
- Foraging and Commuting Habitat: Retain, protect, and enhance woodland, scattered trees, and hedgerows as key commuting and foraging corridors.
 - Bat-Friendly Planting: Integrate night-scented species such as jasmine and honeysuckle in landscaping to attract nocturnal insects.
 - Roosting Features: Install artificial bat roosts and integrate bat boxes on retained trees, prioritising features suitable for maternity roosts.

7. REFERENCES AND BIBLIOGRAPHY

- Bradley Murphy Design (2025).. Preliminary Ecological Assessment (including initial bat)
BMD.25.0155.RPE.p1.001.-.Ecology & Initial Bat.
- CIEEM (2017). *Guidelines on Ecological Report Writing* (2nd edn). Winchester: CIEEM.
- Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines. (4th ed) Bat Conservation Trust. London.
- Countryside Rights of Way Act, 2000.
- Joint Nature Conservation Committee (2001) Habitat management for bats. A guide for land managers, land owners and their advisors.
- Mitchell-Jones, A.J. & McLeish (2004). *Bat Workers' Manual*, 3rd edition, JNCC, Devon.
- Russ, J. (2012) British Bat Calls: A Guide to Species Identification. Pelagic Publishing; 1st edition
- SLR (2023) SLR Ref: 404.11923.00004 Proposed Anaerobic Digestion Facility at Ashton Keynes, Bat Survey Report.
- The Bat Conservation Trust (2014). *The State of the UK's Bats 2014*.
- The Conservation of Habitats and Species Regulations 2017, as amended.
- The Wildlife and Countryside Act, 1981 (as amended).
- Tyler Grange (2024). Technical Note – Ashton Keynes – 17204_R01.

8. GLOSSARY

8.1 Scientific Terms and Acronyms

Big bat / big bat group Refers to bats of the *Nyctalus* genus and serotine bats.

CIEEM Chartered Institute of Ecology and Environmental Management, the professional organisation and provider of professional codes of conduct for ecological consultancy.

Notable species A species which is listed as a UK Priority Species, carries an unfavourable conservation status (e.g. scarce, rare, threatened, Red-listed), is invasive or is otherwise worthy of note from an ecological perspective.

PRF Potential Roosting Feature. A feature on a building or tree that has potential to support roosting bats.

Protected species A species protected under specific UK or European legislation, including Habitats Directive, Wildlife and Countryside Act.

UK Priority Habitat / Species A habitat or species identified as a priority for conservation in accordance with Section 41 of the Natural Environment and Rural Communities Act (2006). Section 40 of the Act places a duty on public authorities to have regard for the conservation objectives of these habitats / species. (Also known as Section 41 (S41) habitats/species).

8.2 Bat Specific Terminology

8.2.1 The following categories are used to describe the level of roosting potential of buildings and trees; these are based on current best practice (adapted from Table 4.1, p. 44; Collins, 2023):

- **Negligible**: Negligible features within the building likely to be used by roosting bats.
- **Low**: A structure with one or more PRFs 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).

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.

- **Moderate**: A structure or tree with one or more PRFs 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.
- **High**: A structure or tree with one or more PRFs that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
- **Confirmed Roost**: Presence of bats or evidence of use by bats.

8.2.2 Bats have different types of roost at different stages in their life cycle and at different times of year. Table 8.1 details terms used to describe types of bat roosts. These descriptions are based on current best practice (Collins, 2023 and Hundt, 2012).

Table 8.1 Description of different types of roosts used by bats

Roost type	Period when used	Used by	Other comments
Transitional/ occasional	April – September/October a few days prior or following hibernation	A few individuals (occasional small groups) for (generally) short periods of time.	Used prior to hibernation or when wake for short periods during hibernation. Roosts are generally cool.
Maternity	May – August	Breeding females (females & dependent young).	Males rarely present, although male long-eared bats, Daubenton's, Natterer's, horseshoe bats have been found in maternity roosts with numbers increasing through the active season.
Satellite	May – August	Females. A few to small groups.	Located near maternity roosts & used by females as an alternative roost site.
Mating	Late summer to through winter	Mating individuals.	Used by males of some species that defend a territory and display/call females to mate.
Hibernation	October - March	All. May get different species using same roost.	Cool, constant temperature with high humidity.
Night	March – November	Single individual on occasion or regularly used by a colony to rest/shelter during the night.	May be of high value to some species, such as lesser horseshoe, providing key resting places with foraging areas.
Day	March – November (rarely found by night in summer)	Single bat or few individuals (males) for resting/shelter during the day.	Bats may have several day roosts, regularly used, switching daily or one used for several weeks at a time.
Feeding	May – November	Single bat or few individuals or a colony for resting/feeding at night. Rarely present during the day.	Often used by long-eared and horseshoe bats.
Swarming Sites	Late summer/autumn	Large numbers of different species (both sexes) gather.	Generally, around caves & mines. Often dominated by Myotis bats. Potentially important mating sites with bats travelling many kilometers to use. Some bats may remain to hibernate.

8.3 Scientific Names

8.3.1 Scientific names of species mentioned in this report are outlined in Table 8.2.

Table 8.2 Scientific names of species mentioned within this report

English Name	Scientific Name
Barbastelle	<i>Barbastella barbastellus</i>
Bechstein's bat	<i>Myotis bechsteinii</i>
Brandt's bat	<i>Myotis brandtii</i>
Brown long-eared bat	<i>Plecotus auritus</i>
Common pipistrelle	<i>Pipistrellus pipistrellus</i>
Daubenton's bat	<i>Myotis daubentonii</i>
Greater Horseshoe bat	<i>Rhinolophus ferrumequinum</i>
Leisler's bat	<i>Nyctalus leisleri</i>
Lesser Horseshoe bat	<i>Rhinolophus hipposideros</i>
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>

Natterer's bat	<i>Myotis nattereri</i>
Noctule	<i>Nyctalus noctule</i>
Serotine	<i>Eptesicus serotinus</i>
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>
Whiskered bat	<i>Myotis mystacinus</i>

APPENDICES

PLANS AND PHOTOGRAPHS

BMD.25.0155.DRE.003– Tree and Camera Locations Plan



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Application boundary (70,316.0m²)

Tree (2)

Surveyor location (3)

Static bat detector (2)

Camera viewing arc

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Rev	Description	--	
Purpose of Issue			
PLANNING			
Bradley Murphy Design Ltd Studio 3, Floor 18 Alpha Studios Alpha Tower Suffolk St Queensway Birmingham B1 1TT t: 0121 815 9127 e: info@bradleymurphydesign.co.uk www.bradleymurphydesign.co.uk			
Client			
ACORN BIOENERGY			
Project			
ASHTON KEYNES AD FACILITY			
Drawing Title			
EMERGENCE SURVEY MAP			
Drawn	Checked	Approved	Date
MP	AN	JW	23/09/25
Job No.	Scale	Sheet Size	Revision
25.0155	1:900	A3	-
Drawing Number			
BMD.25.0155.DRE.003			

SITE PHOTOGRAPHS



Photograph 1: North aspect of tree T1.



Photograph 2: South aspect of tree T1.



Photograph 3: North aspect of tree T2.

A. NATIONAL POLICY AND LEGISLATION AND GUIDANCE

- A.1.1 Bats are protected under European (Conservation of Habitats and Species Regulations 2017 – Schedule 2) and UK (Wildlife and Countryside Act 1981 (as amended): Schedule 5, Section (9)(4b, 4c) and (5)) wildlife legislation. Some species are also a Priority Species (Natural Environment and Rural Communities Act (2006) – Section 40, listed in accordance with Section 41).
- A.1.2 Key planning policies / documents are:
- The Environment Act (2021);
 - Schedule 7a of the Town and Country Planning Act (1990);
 - The National Planning Policy Framework (2025); and
 - The Natural Environment and Rural Communities (NERC) Act (2006).

B. ASSESSMENT METHODOLOGIES

B.1 Nocturnal Surveys

Dusk Emergence Surveys

- B.1.1 Surveyors were in place 15-20 minutes prior to sunset, remaining in place for approx. 1.75 hours. A sufficient number of surveyors was utilised to observe Potential Roost Features (PRFs) identified during the initial surveys between July and August 2025. Surveyors employed handheld bat detectors (Echo meter touch 2 pro's) and recording equipment to aid in identification of any bats observed (Canon Xa40). Each surveyor monitored PRFs for the presence of emerging bats flying away from the PRFs at dusk. A general observation of bat activity within the area was also recorded in order to determine the usage of the area by bats.

B.2 Timing of Surveys

- B.2.1 The nocturnal surveys were undertaken during suitable conditions within the accepted season (May to August considered optimal). Suitable conditions were considered to be nights where temperatures were above 10°C and there was an absence of heavy rain or strong wind (Beaufort scale 6 or greater).
- B.2.2 See Appendix C for a summary of survey conditions.

C. METADATA, SURVEY CONDITIONS AND LIMITATIONS

C.1 Metadata

Factor	Detail
Data	Bat registrations recorded on Echometer Touch (pro) bat detector full spectrum format. Infrared cameras were used with associated infrared lighting.
Reason for collection	To provide baseline data pertaining to bats. To inform appropriate mitigation in relation to proposed development.
Location	Ashton Keynes AD Facility Approx. centre: SU 03979 96156
Date	See table C.2.1 below for survey dates.
Method of collection	Nocturnal survey using bat detectors following current best practice (Collins, 2023) Bat detectors: Echometer Touch (pro) supplemented with Infrared Cameras and Lights.
Who collected	Archie Neale (Experienced surveyor) Aoife Gilmore (Experienced surveyor) Jasmine Whitmore (Experienced surveyor)

C.2 Survey Conditions

C.2.1 Emergence Surveys

Date	Time	Preceding days	Temperature (°C)	Cloud (%)	Wind (Beaufort)	Precipitation
30/06/2025	20:45-22:45	Sunny with partial cloud.	20-18	40	1	None
27/08/2025	19:50 – 21:50	Partial cloud, light wind.	16-14	30	2	None

C.3 Limitations Review

Consideration	Comment
Survey & data	
Personal competence, i.e. qualifications, training, skills, understanding, experience	All survey works were undertaken by or directly supervised by personnel experienced in ecological surveying and licensed to undertake bat surveys (see meta data; Section C1). <u>Jonathan Wood BSc (Hons) MCIEEM</u> has over 10 years' experience in ecological consultancy, including an experience of performing and coordinating the survey work and assessments undertaken at Site. Jonathan holds a Level 1 bat licence 2023-11455-CL17-BAT and Level 2 licence 2024-1254-CL18-BAT <u>James Patmore CEng CEnv MCIEEM</u> has over 23 years' experience in ecological consultancy, including an extensive amount of experience performing and directing ecological survey work and assessments. <u>Archie Neale BSc (Hons)</u> has over 4 years' experience in ecological consultancy, including an experience of performing and coordinating site based ecological mitigation work, ecological surveys and reporting. <u>Aoife Gilmore BSc (Hons)</u> has a year's experience in ecological consultancy, including experience in carrying out survey work and assessments undertaken on Site along with technical writing.

Consideration	Comment
	<u>Jasmine Whitmore BSc (Hons)</u> has two years' experience in ecological consultancy, including an experience of carrying out survey work and assessments undertaken at Site, along with technical writing.
Resources (equipment and/or personnel)	Appropriate resources and suitably qualified personnel were used. Echo Meter Touch 2 Pro detectors were used, recording sonograms in full spectrum and sound in heterodyne. Infrared cameras were used with associated infrared lighting. While some technical issues were encountered with IR cameras and audio detectors (power failures, loss of data), these limitations are not considered to have significantly compromised the survey results or necessitated revisits.
Time spent surveying	Sufficient time was spent on site to determine if the trees were being used as active roosts. The method used for the nocturnal surveys including the number of surveys and time spent on each survey accorded with best practice guidelines as published by the Bat Conservation Trust (Collins 2023).
Data (e.g. arising from incomplete or inappropriate surveys)	The data collected were sufficient for the purpose of the works.
Lack of statistical robustness and higher uncertainties	Statistical analysis of data was not deemed necessary for the purpose of the current works.
Old and out of date data	All surveys have been conducted in the current bat season and are considered in-date.
Timing or seasonal constraints and suboptimal survey periods	The nocturnal surveys were conducted between July and August 2025. May to August is considered to be appropriate to detect maternity colonies, males and non-breeding females in summer roosts (Collins, 2023).
Partial use of and/or departures from good practice guidelines	All surveys accorded with the relevant best practice guidelines.
Site conditions & other factors	
Adverse weather conditions	No significantly adverse weather conditions were encountered during the survey work undertaken at the Site that would be considered to have significantly adversely impacted the reliability and accuracy of data collected.
Restricted access to site or part of site	Unable to record the eastern elevations of the trees as the only access points would be on a busy road with limited visibility.
Unrealistic deadlines	No restrictions on survey data collected or analysed to date are as a result of unrealistic deadlines.
Unproven or untested measures for mitigation and compensation	N/A
Evaluation of conservation value and impacts	The evaluation of the conservation value for bats within the site and impacts of the development, are based on the current information available. This evaluation will need to be reviewed and updated as necessary should a considerable period of time (24 months) elapse and/or more data from other survey work (on and within 1 km of the site) becomes available.

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ALPHA TOWER