



Nocturnal Emergence Bat Report

Prepared on behalf of: Marie Yates



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Document Control

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Antony Aslam	A Aslam	31/07/26	1.0

Summary

ROAVR Group was appointed by Marie Yates to undertake nocturnal emergence surveys of Victoria House, Stanley Moss Lane, Stanley, Stoke-on-Trent ST9 9LR, in support of proposals to demolish the existing dwelling and construct a replacement dwelling within its footprint.

A Preliminary Roost Assessment undertaken on 27 April 2026 included an internal and external inspection of the dwelling. The building was assessed as having moderate suitability for roosting bats due to the presence of potential roost features, and two dusk emergence surveys were therefore recommended. Full details of the preliminary assessment are provided within the Preliminary Roost Assessment prepared by Arbtech (2026).

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. This section also provides some brief information on the ecology of British bat species.

Two dusk emergence surveys were undertaken on 24 June and 15 July 2026, 21 days apart. Three surveyors monitored the building using full-spectrum bat detectors, supported by night vision aids and a static detector. No bats were observed emerging from the building during either survey, and subsequent review of the night vision footage identified no emergence from the assessed features. Bat activity recorded within the site comprised commuting and foraging activity only.

Recommendations:

R1: In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species.

Ioana Andor
Ecologist
ROAVR Group.

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1 Introduction

Brief and Site Location

This report presents the findings of two dusk emergence surveys undertaken at Victoria House, Stanley Moss Lane, Stanley, Stoke-on-Trent ST9 9LR. The site is centred at Ordnance Survey Grid Reference SJ 92511 52387.

Proposed Works

The proposals comprise demolition of the existing dwelling and construction of a replacement dwelling within its footprint.

Legislation and Planning Policy

Bats

All UK species of bat are protected species. Their breeding sites or resting places¹ (roosts) are fully protected under the Wildlife and Countryside Act 1981² (as amended) and the Conservation of Habitats and Species Regulations 2017³ which continues to apply in UK law through the Conservation of Habitats and Species (Amendment) (EU Exit) ['CHSAEU'] Regulations 2019⁴. Works affecting bats are subject to licensing procedures by Natural England (NE). The legal protection and licensing procedures are summarised in Appendix 1.

Survey Scope

In line with the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2023), two dusk emergence surveys were undertaken using infrared night vision aids. The surveys aimed to determine whether bats were roosting within the property and to provide information on bat use of the site.

Reporting

This report aims to:

- Outline the survey methodology used;
- Present the results of the survey;
- Provide an interpretation of the survey results;
- Determine the need for further targeted surveys; and
- Provide suitable recommendations in line with planning policy and wildlife law, including potential licensing requirements, mitigation, compensation and enhancement measures.

¹<https://www.legislation.gov.uk/ukpga/1981/69>

²<https://www.legislation.gov.uk/ukpga/1981/69>

³<https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

⁴<https://www.legislation.gov.uk/ukdsi/2019/9780111176573>

2 Methodology

Field Study

Dusk Emergence Survey

In line with the specifications detailed in Bat Surveys: Good Practice Guidelines (Collins, 2023), the nocturnal surveys commenced 20 minutes prior to sunset and continued until 120 minutes after sunset. The nocturnal emergence surveys were conducted using full spectrum bat detectors and night vision aids. For both surveys, three EchoMeter Touch Pro for iOS connected to x2 iPhone 14 Pro and x1 iPhone 16 alongside a Song Meter Mini Bat 2 static detector were used to facilitate the detection of bats and to aid in the determination of species of bat using the site. Audio files were analysed using Kaleidoscope Pro Analysis Software to identify bat species through call frequencies post-survey.

Due to the difficulty in detecting late emerging bats, night vision aids were utilised during the surveys to assist in detecting late emerging bats. The NVAs were x4 Nightfox Whisker night vision binoculars for both emergence surveys. The camcorder footage was later analysed using FCPX video slow and fast speed ramp software to allow slowing down the video in line with the recorded bat call to ensure the location of bat movement was captured to conclude if the bat emerged from potential roosting features associated with the site. The location of the infrared camcorders remained the same during the survey to ensure a full coverage of the areas of the building to be affected by the proposals.

Constraints

General Temporal Constraints An ecological survey can only identify what is present on site at the time it is conducted. However, habitat usage by species can change over time.

3 Survey Results

Surveyors' Experience

Ioana Andor is an ecologist with four years' professional experience in ecology, including ecological desk studies, field surveys, technical reporting and protected species assessment. Her consultancy experience includes involvement in Biodiversity Net Gain (BNG) assessments, habitat surveys, Preliminary Ecological Appraisals (PEAs), Preliminary Roost Assessments (PRAs), and bat emergence and activity surveys. Ioana is currently in her fifth survey season undertaking bat activity and emergence survey work. Ioana is a member of the Bat Conservation Trust and undertakes conservation volunteering related to bats in the UK. She holds a combined BSc degree in Animal Behaviour and Psychology as well as an MSc in Wildlife Conservation from the University of Chester, specialising in ethology, behavioural ecology and field surveys. Through academic training, professional development and practical consultancy experience, Ioana has developed a broad range of ecological field survey, habitat assessment and reporting skills relevant to ecological consultancy.

Kola Lam holds an MSc in Environmental Management from the University of Hong Kong, following completion of a BSc in Environmental Management at Flinders University. He has over ten years' professional experience in environmental field survey work, including previous experience as an Environmental Officer in Hong Kong, where he undertook surveys across a range of field conditions and environmental settings. Since joining ROAVR seven months ago, Kola has been regularly involved in the delivery of Preliminary Roost Assessments, Preliminary Ecological Appraisals and Biodiversity Net Gain assessments. This combination of academic training, practical field experience and recent UK-based ecological consultancy work supports his contribution to a range of ecological assessment projects.

Ryan Robinson is a freelance bat surveyor with three seasons of survey experience and a keen interest in bat conservation. He has successfully completed National Bat Monitoring Programme (NBMP) Level 1 and Level 2 training and enjoys volunteering his time to support bat conservation in the UK.

ROAVR Group is a nationwide arboricultural and ecological consultancy with directly employed staff nationwide supporting those passing through the planning process. Established in 2013, we have thirteen years of experience conducting surveys and reporting work.

Dusk Emergence Surveys

Two nocturnal emergence surveys were undertaken on 24/06/26 and 15/07/26 by Ioana Andor, Kola Lam and Ryan Robinson. The weather conditions recorded at the time of the surveys are detailed in Table 3.1

Parameter	Conditions	
	Start	Finish
Date: 24/06/26		
Temperature (°C)	21°C	20°C
Cloud Cover	Few clouds (1/8 Okta scale)	Few clouds (1/8 Okta scale)
Precipitation	None	None
Wind Speed (mph)	5mph	4mph
Date: 15/07/26		
Temperature (°C)	23°C	21°C
Cloud Cover	Few clouds (1/8 Okta scale)	Few clouds (1/8 Okta scale)
Precipitation	None	None
Wind Speed (mph)	3mph	2mph

Table 3.1: Weather Conditions During the Nocturnal Emergence Surveys

The nocturnal emergence surveys commenced 20 minutes prior to sunset and continued until 120 minutes after sunset. For Survey 1 sunset was at 21:18hrs, for Survey 2 sunset was at 21:27hrs (XCWeather).

The surveys 24/06/26 and 15/07/26 recorded low to moderate levels of bat activity, comprising commuting and foraging behaviour only. Species recorded on the 24/06/26 include common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Nathusius' pipistrelle (*Pipistrellus nathusii*), noctule (*Nyctalus noctula*) and *Myotis* species. Species recorded on 15/07/26 include common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Leisler's bat (*Nyctalus leisleri*) and *Myotis* species

No species of bat were seen emerging from the building during either of the surveys. Analysis of the video recordings confirmed that no bats were recorded to be emerging from the building.

NVA Use:

Daylight pre-start screenshots were taken at the beginning of the surveys to document surveyor positions and to confirm unobstructed views of key bat access features on the building. The images provide clear reference to architectural details, such as uplifted roof tiles and hanging tiles, which may offer roosting features for crevice-dwelling species. Night-time end-of-survey screenshots were captured following survey completion to verify camera angles, visibility, and positioning accuracy under low-light conditions.

Collectively, all screenshots are clear with adequate visibility, and confirm that static and handheld survey equipment was well-positioned to detect emerging, re-entering, or commuting bats during each survey session.

Camera Details/ Notes	Photographic Plates
Date: 24/06/26	
Camera 1 location with day and night screenshots Western elevation	 Daytime Screenshot 

Camera 2 location with day and night screenshots Southern elevation	Nighttime Screenshot  Daytime Screenshot  Nighttime Screenshot
Camera 3 location with day and night screenshots Eastern elevation	 Daytime Screenshot



Nighttime Screenshot

Camera 4 location with day and night screenshots

Northern elevation



Daytime Screenshot



Nighttime Screenshot

Date: 15/07/26

Camera 1 location with day
and night screenshots

Western elevation



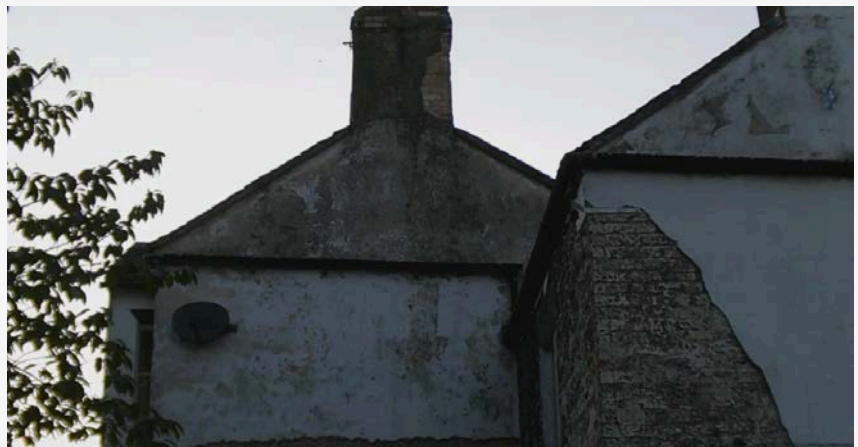
Daytime Screenshot



Nighttime Screenshot

Camera 2 location with day
and night screenshots

Southern elevation



Daytime Screenshot



Nighttime Screenshot

Camera 3 location with day
and night screenshots

Eastern elevation



Daytime Screenshot



Nighttime Screenshot

Camera 4 location with day and night screenshots

Northern elevation



Daytime Screenshot



Nighttime Screenshot

4 Conclusion and Required Actions

The bat activity surveys were undertaken in accordance with best practice guidelines set out in Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn), and comply with relevant standards outlined by CIEEM (2017). The site was subject to a Preliminary Roost Assessment (PRA), which concluded the structure supported features of moderate suitability for bats, primarily associated with missing roof tiles, shifted or loose tiles as well as missing mortar. As such, two dusk emergence surveys were required to assess roost status, which has been completed in line with guidance and during suitable seasonal and weather conditions.

Given that no bats emerged from the building it is concluded that there are no bat roosts present in the property on site at the time of the surveys. Therefore, the proposed works are not expected to impact roosting bats, and as such the proposed works may proceed as scheduled.

Key considerations:

- All survey effort has been carried out in accordance with the recommended protocol for buildings with moderate suitability roost features, comprising two dusk emergence surveys.
- The surveys 24/06/26 and 15/07/26 recorded low to moderate levels of bat activity, comprising commuting and foraging behaviour only. Species recorded on the 24/06/26 include common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Nathusius' pipistrelle (*Pipistrellus nathusii*), noctule (*Nyctalus noctula*) and *Myotis* species. Species recorded on 15/07/26 include common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Leisler's bat (*Nyctalus leisleri*) and *Myotis* species
- All recorded bat activity was consistent with bats commuting across the garden area and along established mature tree canopies in the garden. Foraging activity was noted for a range of species and included brief passages during commutes.
- The photographic record confirms adequate camera positioning to cover all potential roost access points. NVAs demonstrate good visibility and appropriate dusk survey timing, consistent with good field protocol.
- No evidence was found to indicate the presence of a bat roost within the building or its immediate structural features at the time of the surveys.

4.1 Licensing Requirements for Bats

No Bat Licensing is required at this stage. In the unlikely event that a bat is found during site works, all works in that area must immediately cease and a suitably qualified ecologist should be contacted.

4.2 Avoidance, Mitigation, Compensation and Enhancement Measures for Bats

In the absence of confirmed bat roosts and subject to appropriate timing and method of works, it is considered unlikely that the proposed development would result in an offence under the Conservation of Habitats and Species Regulations 2017 (as amended), which transposes the requirements of the EU Habitats Directive into UK law.

No bat roost within the building was identified at the time of the surveys. Enhancement for bats is encouraged in form of habitat enhancement:

- The planting of species which attract night flying insects is encouraged as this will be of value to foraging bats, for example: evening primrose (*Oenothera biennis*), goldenrod (*Solidago virgaurea*) and honeysuckle (*Lonicera periclymenum*).
- External lighting associated with the dwelling or garden should comply with bat-sensitive lighting principles, avoiding upward spill or unnecessary illumination of potential bat flight lines or foraging areas (BCT & ILP 2018).

These measures would contribute to the maintenance and enhancement of bat habitat and ecological connectivity on site, and ensure compliance with national biodiversity objectives and professional survey standards.

4.3 Longevity of Report

Survey data should ideally be from the last survey season before a planning or licence application is submitted, although the length that survey data remains valid should be decided on a case-by-case basis and is dependent upon several factors (Collins, 2023). If development works do not begin within twelve to eighteen months of the date of this report, an updated survey may be required in accordance with guidance in BS 42020:2013⁵ and CIEEM (2019), to determine if conditions and bat use has changed since described in the current report.

⁵<https://www.omegawestdocuments.com/media/documents/43/43.35%20BSI%20Biodiveristy%20Code%20of%20Practice.pdf>

5 Limitations

ROAVR Group has prepared this Report for the sole use of the above named Client/Agent in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us.

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Should you require any further information, please do not hesitate to contact us at any time.

Ioana Andor
Ecologist



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Checked by: Antony Aslam MSci QCIEEM

6 References

Anonymous (2007) *Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC*. Final version, February 2007.

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CIEEM (2020) *Guidelines for Accessing, Using and Sharing Biodiversity data in the UK*.
<https://cieem.net/wp-content/uploads/2016/03/Guidelines-for-Accessing-and-Using-Biodiversity-Data-March-2020.pdf>

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Institute of Lighting Professionals (2012) *Guidance for The Reduction of Obtrusive Light*.

Mitchell-Jones, A.J, & McLeish, A.P. Ed., (2004) *Bat Workers' Manual (3rd Edition)*. Joint Nature Conservation Committee, Peterborough.

Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. Natural England, Peterborough.

Bats and Artificial Lighting at Night - ILP Guidance Note - The Institution of Lighting Professionals, (GN08/23) August 2023

7 Appendix 1

Bat Ecology

There are 18 known breeding species of bat found in the UK, with additional species recorded as migrants or vagrants. All of them are small, nocturnal, flying, insectivorous mammals that are under conservation threat, and many have undergone massive population declines over the last century. Some species, such as common (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) are relatively common and widespread in the UK, while others, such as greater horseshoe (*Rhinolophus ferrumequinum*) bats, have an extremely restricted distribution.

Most bats will use a variety of roosts of different types throughout the year. The winter hibernation sites typically have cool, humid conditions with a stable microclimate and low levels of disturbance. Most British bats hibernate in caves or artificial structures that fulfil such requirements, such as mines, tunnels and cellars. Bats emerge from hibernation around late March or early April and move into transition or intermediary roosts. Around late May- early June, female bats gather in colonies to form maternity roosts, and it is here where they will give birth between late June and late July. A colony may consist of many individuals (sometimes hundreds of bats) of mixed age and sex. Roosts occur in a variety of habitat types, including tree-holes, caves, buildings and other secure crevices or internal spaces with appropriate stable temperatures and humidity. Bats may change roost locations many times during a year, and colonies may split up and reform during this period. Males occupy solitary roosts in autumn, to which they attract females for mating.

Legislation

All British bat species and any place used for shelter or protection, or a breeding site or resting place (their roosts) are fully protected under the amended Wildlife and Countryside Act 1981 through inclusion in Schedule 5. The roosts are protected irrespective of whether bats are present at the time. All bats are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) ['CHSAEU'] Regulations 2019.

These pieces of legislation make it illegal to deliberately or recklessly:

- kill, injure or capture bats;
- disturb bats;
- damage, destroy, or obstruct access to bat roosts (including sites that are currently unoccupied);
- possess or transport a bat or any part of a bat unless acquired legally; or
- sell, barter or exchange bats or parts of bats.

Disturbance is defined as any activity that is likely to impair bats ability:

- to survive, to breed or reproduce, or to rear or nurture their young;
- to hibernate or migrate; or
- to significantly affect the local distribution or abundance of the species to which they belong.

Habitats Regulations Licensing

If a European Protected Species will be affected by a development, Natural England (NE) can issue licences under the Habitats Regulations to permit otherwise prohibited acts. Licences for certain activities can be granted providing “three tests” are satisfied, that is:

1. the purposes of “preserving public health or safety, or for reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment”;
2. there must be “no satisfactory alternative”; and,
3. the derogation is “not detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

Where Planning regulations apply, NE will only issue a licence after planning consent has been granted.

The licence application will require the production of a detailed method statement, which sets out the activities to be carried out under the licence to minimise the risk of bats being harmed during construction works and ensure that bats will be conserved during the development of the site. This will need to detail the mitigation proposed (such as the replacement or compensation roost), the timescale and schedule of works, the number, size and locations of bat access points to be provided, the type of materials to be used (roofing material, roof lining, fascias, soffits and bargeboards etc.), lighting proposals, action to be taken in the event bats are found during works and a post-development monitoring programme. The method statement will need to be accompanied by scaled plans and maps detailing the bat mitigation features.

A cross-section of the access points and roost space is often required. The method statement must ensure that provision is made for new or continued roosting opportunities after the completion of development works. In some instances, a method statement is requested by Natural England before the planning application is determined.

Natural Environment and Rural Communities (NERC) Act 2006

Under Section 40 of the Natural Environment and Rural Communities Act (2006), Local authorities have a duty to have regard to the conservation of biodiversity in exercising their functions. The duty affects all public authorities and aims to raise the profile and visibility of biodiversity, to clarify existing commitments regarding biodiversity, and to make it a natural and integral part of policy and decision making. Seven of the UK

species of bat (soprano pipistrelle, barbastelle, Bechstein's, noctule (*Nyctalus noctule*), brown long-eared, lesser horseshoe and greater horseshoe bats) have been listed on the UK Biodiversity Action Plans (2007) as conservation priorities.

National Planning Policy Framework (2021) and Biodiversity and Geological Conservation Circular 06/2005

The National Planning Policy Framework (2021) and Biodiversity and Geological Conservation–Statutory Obligations and Their Impact within the Planning System Circular (06/2005) state that the presence (or otherwise) of a protected species is a material planning consideration and the extent that they may be affected by the proposed development must be established before planning permission is granted. Otherwise, all relevant considerations may not have been addressed in making the decision.

Appendix 1.1: Survey Site Plan

Surveyor location:

S1 

S2 

S3 

STAT1 

CAM1 

CAM2 

CAM3 

CAM4 

*approximate locations



Note. Survey Site Plan displaying the location of surveyors, night vision aids (CAM) and static detector (STAT) during both emergence surveys (24/06/26 & 15/07/26).

Appendix 1.2: Surveyor Notes 24/06/26

Surveyor 1: IA Western elevation

Time	Species	Emerged	Notes
21:50	NOCT	N	Heard not seen
21:57	NPIP	N	Heard not seen
21:57	SPIP	N	Heard not seen
22:01	CPIP	N	Heard not seen
22:05	SPIP	N	Heard not seen
22:07	NOCT	N	Heard not seen
22:10	CPIP	N	Foraging in tree canopy
22:19	CPIP	N	Seen flying across yard east to west
22:19	CPIP	N	Heard not seen
22:21	CPIP	N	Heard not seen
22:23	CPIP	N	Flying across yard east to west
22:30	CPIP	N	Heard not seen
22:33	CPIP ×2	N	Heard not seen
22:34	SPIP ×2	N	Heard not seen
22:34	CPIP	N	Heard not seen
22:35	CPIP	N	Heard not seen
22:38	CPIP	N	Heard not seen
22:46	NPIP	N	Heard not seen
22:46	NOCT	N	Heard not seen
22:46	CPIP	N	Heard not seen

22:47	CPIP	N	Heard not seen
22:51	CPIP ×2	N	Heard not seen
22:51	NPIP	N	Heard not seen
22:52	CPIP ×3	N	Heard not seen
22:53	CPIP	N	Heard not seen
23:07	CPIP	N	Heard not seen
23:11	MYSP	N	Heard not seen; likely Myotis
23:16	MYSP	N	Heard not seen; likely Myotis
23:19	CPIP	N	Heard not seen
23:20	CPIP	N	Heard not seen
23:24	CPIP	N	Heard not seen
23:27	CPIP	N	Heard not seen

Note. C-PIP – common pipistrelle (*Pipistrellus pipistrellus*); S-PIP – soprano pipistrelle (*Pipistrellus pygmaeus*); N-PIP – Nathusius' pipistrelle (*Pipistrellus nathusii*); NOCT – noctule (*Nyctalus noctula*) and MYSP – *Myotis* species.

Surveyor 2: RR Southern elevation

Time	Species	Emerged	Notes
22:18	CPIP	N	Heard not seen
22:21	CPIP	N	Heard not seen
22:23	CPIP	N	Foraging
22:24	CPIP	N	Foraging
22:27	SPIP	N	Heard not seen
22:34	MYSP	N	Heard not seen
22:38	CPIP	N	Heard not seen
22:42	CPIP	N	Heard not seen
22:44	SPIP	N	Heard not seen

22:51	MYSP	N	Heard not seen
22:52	CPIP	N	Heard not seen
22:55	CPIP	N	Heard not seen
22:59	SPIP	N	Heard not seen
23:11	CPIP	N	Heard not seen
23:11	MYSP	N	Heard not seen
23:20	CPIP	N	Heard not seen
23:24	CPIP	N	Heard not seen

Note. C-PIP – common pipistrelle (*Pipistrellus pipistrellus*); S-PIP – soprano pipistrelle (*Pipistrellus pygmaeus*) and MYSP – *Myotis* species.

Surveyor 3: KL Eastern elevation

Time	Species	Emerged	Notes
22:05	CPIP	N	—
22:08	CPIP	N	Flying west to east
22:11	CPIP	N	Flying west to east
22:15	CPIP	N	Two passes
22:18	CPIP	N	—
22:20	CPIP	N	—
22:24	CPIP	N	Two passes
22:30	CPIP	N	Flying west to east
22:32	CPIP	N	—
22:38	CPIP	N	—
22:39	CPIP	N	—
22:41	CPIP	N	Four passes
22:43	SPIP	N	—

22:43	CPIP	N	Four passes
22:46	CPIP	N	—
22:51	CPIP	N	Two passes
22:54	SPIP	N	—
22:55	NPIP	N	—
23:11	SPIP	N	—
23:12	MYSP	N	Four passes
23:26	CPIP	N	Three passes
23:28	MYSP	N	—
23:30	NPIP	N	—

Note. C-PIP – common pipistrelle (*Pipistrellus pipistrellus*); S-PIP – soprano pipistrelle (*Pipistrellus pygmaeus*); N-PIP – Nathusius' pipistrelle (*Pipistrellus nathusii*); and MYSP – *Myotis* species.

Surveyor 4: Static detector northern elevation

Time	Species	Emerged	Notes
22:04	CPIP	N	—
22:10	CPIP	N	—
22:11	CPIP	N	—
22:18	CPIP	N	—
22:19	CPIP	N	—
22:20	CPIP	N	—
22:28	CPIP	N	—
22:30	CPIP	N	—
22:34	CPIP	N	—
22:38	CPIP	N	—

22:40	CPIP	N	—
22:41	CPIP	N	—
22:42	SPIP	N	—
22:43	CPIP	N	—
22:48	CPIP	N	—
22:53	CPIP	N	—
22:54	SPIP	N	—
22:56	NPIP	N	—
23:10	SPIP	N	—
23:12	MYSP	N	—
Note. C-PIP – common pipistrelle (<i>Pipistrellus pipistrellus</i>); S-PIP – soprano pipistrelle (<i>Pipistrellus pygmaeus</i>); N-PIP – Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>); and MYSP – <i>Myotis</i> species.			

Appendix 1.3: Surveyor Notes 15/07/26

Surveyor 1: IA Western elevation

Time	Species	Emerged	Notes
21:36	CPIP	N	Heard not seen
21:57	SPIP	N	Heard not seen
22:02	LEIS	N	Heard not seen
22:07	CPIP	N	Heard not seen
22:08	CPIP	N	Heard not seen
22:13	CPIP	N	Foraging across site
22:23	CPIP	N	Heard not seen
22:45	SPIP	N	Heard not seen
22:46	CPIP	N	Foraging
22:47	CPIP	N	Heard not seen

22:48	CPIP	N	Heard not seen
22:49	CPIP	N	Heard not seen
22:50	CPIP	N	Heard not seen
22:51	CPIP	N	Heard not seen
22:55	CPIP	N	Heard not seen
22:56	CPIP	N	Heard not seen
23:01	CPIP x2	N	Heard not seen
23:03	CPIP	N	Heard not seen
23:04	CPIP	N	Heard not seen

Note. C-PIP – common pipistrelle (*Pipistrellus pipistrellus*); S-PIP – soprano pipistrelle (*Pipistrellus pygmaeus*) and LEIS – Leisler's bat (*Nyctalus leisleri*).

Surveyor 2: KL Southern elevation

Time	Species	Emerged	Notes
21:53	CPIP	N	Three passes
21:56	CPIP	N	Two passes
22:00	CPIP	N	Two passes
22:05	CPIP	N	Eight passes
22:08	SPIP	N	—
22:18	CPIP	N	Three passes
22:20	CPIP	N	—
22:24	CPIP	N	Two passes
22:24	SPIP	N	Two passes
22:31	CPIP	N	—
22:33	CPIP	N	Two passes
22:37	MYSP	N	—

22:39	CPIP	N	Two passes
22:39	SPIP	N	—
22:43	MYSP	N	—
22:44	CPIP	N	—
22:48	CPIP	N	Two passes
22:50	CPIP	N	Four passes
22:54	CPIP	N	—
22:56	CPIP	N	Two passes
23:00	CPIP	N	Two passes
23:02	SPIP	N	—
23:10	CPIP	N	—
23:13	CPIP	N	—
23:15	CPIP	N	Four passes
Note. C-PIP – common pipistrelle (<i>Pipistrellus pipistrellus</i>); S-PIP – soprano pipistrelle (<i>Pipistrellus pygmaeus</i>); and MYSP – <i>Myotis</i> species.			

Surveyor 3: RR Eastern elevation

Time	Species	Emerged	Notes
21:56	CPIP	N	—
22:02	CPIP	N	—
22:06	CPIP	N	Heard not seen
22:07	CPIP	N	Heard not seen
22:08	CPIP	N	—
22:12	CPIP	N	Heard not seen
22:16	CPIP	N	—
22:17	CPIP	N	—

22:19	CPIP	N	Heard not seen
22:21	CPIP	N	—
22:24	CPIP	N	Heard not seen
22:25	SPIP	N	Heard not seen
22:30	CPIP	N	Heard not seen
22:34	CPIP	N	Heard not seen
22:35	MYSP	N	Heard not seen
22:36	MYSP	N	Heard not seen
22:49	CPIP	N	Heard not seen
22:50	CPIP	N	Heard not seen
22:51	MYSP	N	Heard not seen
22:53	CPIP	N	Heard not seen
23:13	CPIP	N	Heard not seen
23:16	CPIP	N	Heard not seen
Note. C-PIP – common pipistrelle (<i>Pipistrellus pipistrellus</i>); S-PIP – soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) and MYSP – <i>Myotis</i> species.			

Surveyor 4: Static detector northern elevation

Time	Species	Emerged	Notes
21:48	CPIP	N	—
21:55	CPIP	N	—
22:08	CPIP	N	—
22:11	CPIP	N	—
22:13	CPIP	N	—
22:29	CPIP	N	—
22:32	CPIP	N	—

22:33	CPIP	N	—
22:34	CPIP	N	—
22:38	CPIP	N	—
22:42	SPIP	N	—
22:45	CPIP	N	—
22:48	SPIP	N	—
22:52	CPIP	N	—
22:54	CPIP	N	—
22:56	CPIP	N	—
23:02	CPIP	N	—
23:03	CPIP	N	—
23:05	SPIP	N	—
23:08	MYSP	N	—
Note. C-PIP – common pipistrelle (<i>Pipistrellus pipistrellus</i>); S-PIP – soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) and MYSP – <i>Myotis</i> species.			