



Kingston
Bridge House,
Church Grove,
Hampton Wick,
KT1 4AG

Endoscope and eDNA Survey Report

October 2022

Ref: 22-9417



QUALITY STANDARDS CONTROL

The signatories below verify that this document has been prepared in accordance with our quality control requirements. These procedures do not affect the content and views expressed by the originator.

This document must only be treated as a draft unless it has been signed by the originators and approved by a director.

Revision	-
Date	02/11/2022
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Note

The advice which we have prepared and provided within this report is in accordance with the CIEEM Code of Professional Conduct. We confirm that the opinions expressed are our true and professional opinions. Opinions and information provided in the report are based on Syntegra Group Ltd using reasonable skill, care and diligence in the preparation of the same in compliance with the CIEEM Code of Professional Conduct.

Validity of Data

The findings of the site survey are valid for a period of 12 months from the date of the survey. If approved works have not commenced by this date, then an updated site survey could be required to inform any changes to the bat roosts and roosting potential on site in order to inform any updated mitigation and or precautionary measures required on site.

LIMITATIONS

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The conclusions and recommendations contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by SC has not been independently verified by SC, unless otherwise stated in the report.

The methodology adopted and the sources of information used by SC in providing its services are outlined in this report. The work described in this report was undertaken in **2022** and is based on the conditions encountered and the information available during the said period of time. The scope of this report and the services are accordingly factually limited by these circumstances.

Where assessments of works or costs identified in this report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

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No allowance has been made for changes in prices or exchange rates or changes in any other conditions which may result in price fluctuations in the future. Where assessments of works or costs necessary to achieve compliance have been made, these are based upon measures which, in SC's experience, could normally be negotiated with the relevant authorities under present legislation and enforcement practice, assuming a proactive and reasonable approach by site management.

Forecast cost estimates do not include such costs associated with any negotiations, appeals or other non-technical actions associated with the agreement on measures to meet the requirements of the authorities, nor are potential business loss and interruption costs considered that may be incurred as part of any technical measures.

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Appendix I: eDNA Results

1 Introduction

1.1. Syntegra Group was commissioned by the applicant, Westcombe Developments Ltd, to conduct endoscope surveys and eDNA testing at Kingston Bridge House, Church Grove, Hampton Wick, KT1 4AG (Grid ref: TQ 17486939) in support of a planning application 22/1029/FUL. The endoscope survey with dropping collection for eDNA was undertaken on the 23rd of September 2022.

1.2. The site comprises of detached former student block set within hardstanding ground and further bound by church grounds, commercial buildings, and roads. The building at the time of the surveys was vacant.

1.3. The original supporting ecological appraisal (AAe, 2022) noted the building to be of negligible potential for roosting bats. During the consultation period for the application, the council ecologist was informed that the building hosted a known pipistrelle roost. The council ecologist informed the applicant that further bat surveys were required.

1.4. Following dusk and dawn echolocation surveys, it was advised that an endoscope survey with eDNA collection of any droppings found was undertaken to allow for a more detailed classification of the roost(s), species and locations within the building.

2 Limitations

2.1. The initial PEA Survey was not undertaken by Syntegra Group. Discussions with the ecologist, Alison Fure, who has monitored the roost for the past few years informed Patricia Holden of Syntegra Group the known locations of the roosting pipistrelles. The university that holds the reports has declined sharing with the applicant. As a result, endoscope surveys and eDNA testing was advised to inform the roosting locations, species, and possible roost characteristics within the building.

2.2. Certain locations of all holes, gaps, and potential crevices could not be surveyed by the ecologist due to health and safety grounds.

2.3. Given the demolition of the external cladding and internal ceilings, it is likely that additional roosting locations along with their evidence have been destroyed and could not be found by the ecologist during the endoscope inspection.

2.4. For point 4, the surveyor could not fully inspect the wall space due to access issues along with health and safety grounds.

2.5. The client is responsible for reading and understanding the advice given in this report. The client must ensure that, where recommended, mitigation is followed through.

3 Methodology

3.1. On the 23rd of September 2022, the endoscope study was carried out. The survey was undertaken by Charlotte Brennan, a licensed ecologist, who is an experienced ecologist that has

undertaken numerous endoscope surveys and has undergone professional training in bat surveying techniques.

3.2. The endoscope study followed survey guidelines set by the Bat Conservation Trust Bat Surveys Good Practice Guidelines (Collins 2016). Any droppings found during the inspection were collected, location documented, along with dropping characteristics (i.e. age and condition).

3.3. The surveyor used a combination of visual observation with torch and endoscope. All suitable holes, gaps, cracks, and or crevices were inspected with overall features documented (i.e. recessed, blocked, evidence of bat use).

4 Results

4.1. Endoscope Survey

4.1.1. The endoscope survey was carried out on the 23rd of September 2022, commencing at noon. Conditions were suitable with 7mph winds, no rain, overcast, and 18°C. Figure 1 below shows the building surveyed.



Figure 1: Building surveyed. Source: Google Maps.

4.1.2. The surveyor noted three locations with confirmed presence of bats in the form of droppings (referred to Point 1, 2 and 3 in this report). Point 4 could not be fully surveyed due to its location, the surveyor did note its overall potential to have previously supported roosting bats. Figure 2 below details the location (in both google ariel view and elevation plans) of the confirmed presence of roosting bats in the form of droppings and or overall potential for use by roosting bats.

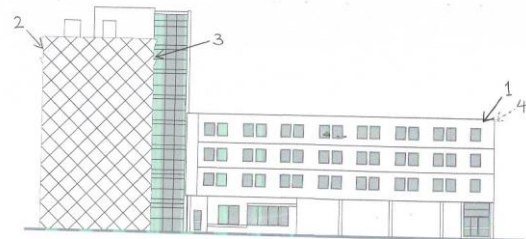
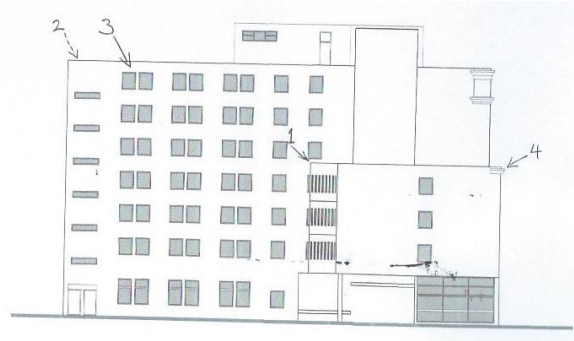
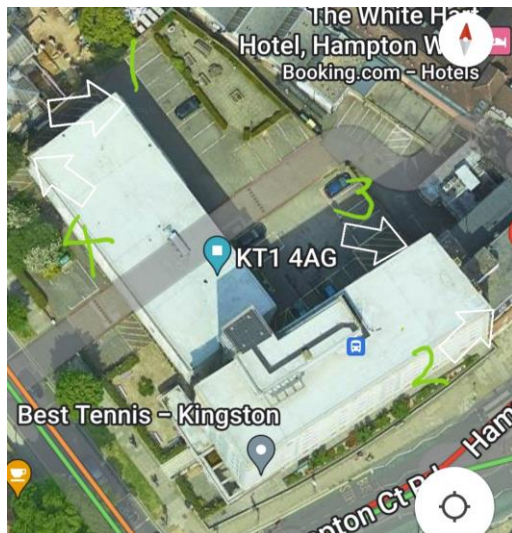


Figure 2: Confirmed Location of Roosting Bats Found During Endoscope Survey Source: Google Maps and Agent

4.1.3. Point 1 is located in the Northeast corner of the building north wing. Droppings were found from a location above a window that Alison Fure has previously described as having a roost entry point. The droppings had a notable age range and cascading from the crevice roost location. The original roost space appears to run along the cladding, the cladding that has been pulled away during previous works shows the extent of the roosting space shown by the number of droppings. It is likely that the roosting space could have run along the whole of the upper wall space especially if no restriction of movement was in place for the individual bats. The number of droppings found is consistent with use as a maternity roost as documented previously by Alison Fure. Figure 3 below shows a close up of the droppings and also the location with the cladding removed.



Figure 3: Point 1 Roost Location and Droppings

4.1.4. Point 2 noted a roosting area located behind the remnant cladding strip within the south-eastern corner of the south wing. A small number of droppings were found within the small void between the cladding and wall space. Only one dropping was retrievable for eDNA testing. The endoscopy survey noted that there was a potential void that runs down the full length of the building that would have been available for use by roosting bats if no restriction in movements was in place for the individual bats. The extent of the area could not be fully inspected by endoscope by the ecologist due to access issues. Figure 4 shows the location of the roosting space and droppings found.



Figure 4: Point 2 Roost Location and Droppings

4.1.5. Point 3 noted droppings located on the window ledge, north facing on the south wing. Droppings found were a mixture of older remnants on outside of wall that were presumably behind cladding originally, and slightly fresher looking droppings on ledges. The photos below in Figure 5, are from the surveyor looking out and down of window. The photo shows the ledge with droppings present with more found at the side of ledge. The other photos include a close up of droppings at just outside a window where the cladding was removed, and remnants of droppings and cladding remain.



Figure 5: Point 3 Roost Location and Droppings

4.1.6. Point 4 location is within the north-western corner of the north wing. Whereas the surveyor could not fully inspect this area due to difficulty with access. It was assumed that the gaps between the wall and cladding could have held potential for roosting bats prior to the cladding removal based on the characteristics of the other three roost points found during the survey. Figure 6 below shows the potential roosting space and areas of cladding that has been removed.



Figure 6: Point 4 Potential Roost Location

4.2. eDNA

4.2.1. The three samples collected from point 1, 2 and 3, were bagged separately and sent to Warwick University for eDNA testing to confirm the species.

4.2.2. The Warwick University results can be found in Appendix I. In summary:

- Point 1 had confirmed the species as common pipistrelle (*Pipistrellus pipistrellus*).
- Point 2 had confirmed the species as soprano pipistrelle (*Pipistrellus pygmaeus*).
- Point 3 had confirmed the species as common pipistrelle (*Pipistrellus pipistrellus*).

5 Discussion

5.1. The original ecology survey report by AAe (2022) found the building to be of negligible potential for roosting bats. Personal communication with Alison Fure has confirmed that the building hosts a mixed common and soprano pipistrelle maternity roost with over three years of monitoring surveys.

5.2. The dusk and dawn echolocation survey carried out in June, July and August 2022 found no emerging bats or re-entries were observed during the surveys.

5.3. The endoscope and visual survey have noted three areas, point 1, 2 and 3, within the building as having confirmed presence of roosting bats in the form of droppings. Point 4 was classed as a likely roosting location due to having similar characteristics to Point 1, 2 and 3.

5.4. Point 1 eDNA testing has confirmed the species as common pipistrelle. Point 2 eDNA testing has confirmed the species as soprano pipistrelle. Point 3 has confirmed the species as common pipistrelle. The finding of mixed species roosting within the building correlates to the previous findings of Alison Fure's monitoring surveys for the university.

5.5. The detailed endoscope and visual inspection have confirmed that the roosting spaces have been destroyed and damaged from the cladding and insulation removal. In the applicants defence the cladding was disclosed as having high fire risk. The applicant instructed an ecological appraisal prior to works which AAe Ecology noted the negligible potential for roosting bats. Although an offence has occurred under the Habitat Regulations and Wildlife and Countryside Act, the client did not knowingly instruct these works with the intention of destroying and damaging a known bat roosts.

5.6. The endoscope surveys and eDNA have been invaluable as they have confirmed the species roosting within the building, narrowed down locations, and the roost characteristics. Given the extent of the works to the building it is considered likely that the roosts have been destroyed. Whereas one or two bats could be utilising new locations within the building due to the change in the building condition from the works, it is certain that the maternity roosts have been completely destroyed from the cladding removal. Undertaking surveys in 2023 could show daytime roosts used by common and

soprano pipistrelle bats but also getting works started and the maternity roosts instated would be in the ecologist's opinion of more importance and value to maintaining the local bat population.

5.7. If the original roosts were considered under the three tests:

- *Test 1: Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.* It is considered that due to the university moving the students out due to health and safety concerns, along with the insurance company ruling the building could not be insured due to fire risk, this test would be met.
- *Test 2: There is no satisfactory alternative.* The "do nothing" option would lead to the decline of the building thus leading to sub optimal conditions for bats with the end result the deterioration of the existing roosts.
- *Test 3: The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.* Both species are common and widespread. As the building hosts a maternity roost works will ensure that the roosts are re-instated under EPSM Licence with similar roost characteristics and locations to ensure uptake. Furthermore, the license would ensure that works are not undertaken during the maternity season. With lighting plans in place along with new landscaping plans, the proposals will ensure that traversing bats are not impacted and that new foraging opportunities are in place with use of native and wildlife friendly planting.

5.8. Given the use of eDNA the building species is known. The roosting locations, although not all the original have been found, the surveys have assisted in the mitigation proposals. It is not considered that without known numbers that Natural England will grant a full EPSM Licence, however, to ensure the applicant is protected it is recommend that a BLICL (Bat Low Impact Class Licence) is applied for. Should Natural England decline, then a full detailed watching brief under a licenced ecologist will be done in place of the BLICL. As works do not cover hibernating bats the timing of works will need to be mid-March onwards, this is all dependent on overnight temperatures and conditions and it must be made known that it could be April when works can start if temperatures and conditions are not suitable.

5.9. The ecologist will work with the architect to design the new roosting spaces. A drawing will be produced and submitted to the council ecologist for their review. The new roosting spaces will consider input from Alison Fure to ensure if any known roosting locations have been missed that these areas are re-instated. The new roosting spaces will need to have internal voids so any internal wall features such as insulation will need to be reviewed by the ecologist.

5.10. To ensure that any new or additional lighting is not detrimental and cause avoidance of areas by local traversing and foraging bats including deterring light sensitive species, lighting proposals will need to ensure minimal light spill. It is recommended that lighting on site is not directed up and outward but rather pointed down, direct, low lux, and if possible, motion sensor. To enable new foraging grounds the applicant will need a landscape plan that ensures use of native and wildlife

friendly species only. The ecologist will review the designs and pass comment if the plans are not within the required remit.

6 Conclusion

6.1. The eDNA testing has confirmed that the building has hosted soprano and common pipistrelle bats. The visual and endoscope surveys have located four areas that have had confirmed presence of roosting bats and the overall potential to support roosting bats. Given the extent of droppings found in Point 1, it is considered highly likely that this area supported a maternity roost. The extent of voids available within the other locations also have the potential to support maternity roosts.

6.2. Given the known historic pipistrelle bat roost within the building and confirmed species by eDNA, a BLICL will be required for the works. Should Natural England decline the request then the route of a detailed watching brief by a licenced ecologist will be required.

7 REFERENCES

Bat Conservation Trust. 2018. Bats and Artificial Lighting in the UK, Guidance Note 08/18 – Bats and the Built Environment Series. London. Bat Conservation Trust.

Collins (2016) Bat Surveys: Good Practice Guidelines, 3rd edition, Bat Conservation Trust.

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Stebbings, R.E, Yalden, D.W., Herman, J.S. Which Bat Is It? The Mammal Society. 2007.

Appendix I: eDNA Results



18 October 22

Re: Identification Results for Trish Holden , Syntegra Group

Job number 19033, received 03 October 2022

Sample labelled: 1 Kingston Bridge House, 23/9/22

PCR amplification successful. DNA sequence:

ATGACAACATTTCGAAATCCCACCCCCTGATCAAAATCATCAATAACTCATTGAT
CTACCAGCTCCATCAAACATTTTCAGCATGATGAAATTTGGGTCCCTATTAGGCATC

Phylogenetic analysis identification: *Pipistrellus pipistrellus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.



16 October 22

Re: Identification Results for Trish Holden , Syntegra Group

Job number 19034, received 03 October 2022

Sample labelled: 2 Kingston Bridge House, 23/9/22

PCR amplification successful. DNA sequence:

ATGACAAACATTTCGAAAGTCCCATCCCCTAATCAAAATTATTAACAGCTCATTTCATTG
ACCTACCAGCTCCATCAAACATCTCAGCATGATGGAATTTGGATCCCTATTAGGCAT
C

Phylogenetic analysis identification: *Pipistrellus pygmaeus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby



16 October 22

Re: Identification Results for Trish Holden , Syntegra Group

Job number 19035, received 03 October 2022

Sample labelled: 3 Kingston Bridge House, 23/9/22

PCR amplification successful. DNA sequence:

TGACAACATTCGAAATCCCACCCCTGATCAAAATCATCAATAACTCATTGATC
TACCAGCTCCATCAAACATTTGAGCATGATGAAATTTGGGTCCCTATTAGGCATC

Phylogenetic analysis identification: *Pipistrellus pipistrellus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby