Former Hoyle Ing Dyeworks, Linthwaite

Nocturnal Bat Survey Report

Highstone Building Services

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Nocturnal Bat Survey Report

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Executive Summary

Ecus Limited (Ltd) was commissioned by Highstone Building Services in August 2021 to undertake nocturnal bat surveys of the buildings, structures and a mill chimney (Ordnance Survey National Grid Reference (OSNGR) SE 09811 14547) at the Former Hoyle Ing Dyeworks, Manchester Road, Linthwaite (hereafter referred to as 'the Site').

A preliminary bat roost assessment (PBRA) undertaken as part of a Preliminary Ecological Appraisal of the Site by Ecus in June 2021 ('*Former Hoyle Ing Dyeworks, Linthwaite – Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment*', report reference17281, dated July 2021)) found that building (B1) displays moderate suitability for roosting bats and B2, the mill chimney (Structure (S) 1) and walls (W1-6) display low suitability for roost bats and so further nocturnal survey was required. Consequently nocturnal bat surveys were undertaken by Ecus in August and September 2021.

The aim was to determine the presence/likely absence of roosting bats at the Site and inform proposals for the demolition of B1 and B2, assess the potential impacts to S1 and W1-6 and facilitate proposed development works at the Site. Current proposals indicate that the Site will be re-developed to provide 15 residential dwellings with associated landscaping and infrastructure.

Three bat roosts were identified in B2 during the surveys. These comprised roosts of individual common pipistrelles *Pipistrellus pipistrellus* (two roosts) and a single brown long-eared bat *Plecotus auritus* (one roost). A licence will need to be obtained from Natural England to enable the works to proceed lawfully.

It is important to note that B2, S1 and W1-6 display suitability for hibernating bats and will need to be subject to two hibernating bat surveys during winter 2021/2022. This survey effort must take place before any potentially disturbing works including development related works commence at the Site. In the event that a bat hibernation roost is identified at the Site then this will also need to be included in the required bat mitigation and habitat compensation measures.

The results of the hibernation surveys will determine whether a Bat Mitigation Class Licence (BMCL) or European Protected Species (EPS) mitigation licence is required; current data indicates that a BMCL would be appropriate. Ideally works will be timed to avoid the period when bats are most likely to be using B2, i.e. avoiding the active period (May to August) and the peak hibernation period (December to February) if works are being undertaken under an EPS licence. Given the findings of the September visit, works should also avoid taking place in this month. A mitigation strategy will be compiled and implemented, and compensatory roosts will be delivered at the post-development site.

No bat roosts were identified in B1, S1 or W1-6 during the nocturnal surveys undertaken in 2021 therefore it is considered unlikely that roosting bats are associated with these building/structures. However given the presence of roosts in B2, and that an internal inspection of B1 was not possible, it is recommended that a precautionary approach is taken when demolishing this building, including provision of a toolbox talk and initial supervision by a suitability qualified ecologist. It is considered that this assessment will remain valid for a period of two years from the date of this report. In the event that demolition does not proceed within two years or there are considerable changes to the building within this timeframe, an update to this survey report will be required.

In order to compensate for the loss or roost sites and, in order to enhance the post-development Site's suitability for roosting bats, provision will include no less than 5 building integrated bat boxes e.g. integral Schwegler 1FR bat tubes or Habibat bat boxes (these are available in a variety of finishes to suit the aesthetic of the new houses). This will provide roosting provision for bats on 30% of properties.

To maintain the (albeit low level) value of the Site for commuting and foraging bats in the long term post-

construction, a sensitive lighting scheme will be designed which avoids any direct lighting of or light spillage onto S1, W1-6, new roosting provision, and of new habitat to be created on Site. Given the presence of light avoiding species at the Site, namely brown long-eared bat, any light spill onto boundary features and retained and new habitat will be limited to a maximum of 3 lux.

1. Introduction

1.1 Overview

1.1.1 Ecus Limited (Ltd) was commissioned by Highstone Building Services in August 2021 to undertake nocturnal bat surveys of the buildings, structures and a mill chimney (Ordnance Survey National Grid Reference (OSNGR) SE 09811 14547) at the Former Hoyle Ing Dyeworks, Manchester Road, Linthwaite (hereafter referred to as 'the Site'). The Site is displayed in Figure 1.

1.1.2 The Site comprises two buildings (Building (B) 1 and B2), a mill chimney (Structure (S) 1) and a number of boundary walls (Wall (W) 1-6), short perennial vegetation, scrub and bare ground.

1.1.3 Current proposals indicate that the Site will be re-developed to provide 15 residential dwellings with associated landscaping and infrastructure. The existing buildings (B1 and B2) will be demolished to facilitate the construction of new dwellings and gardens within the development footprint, whilst S1 and W1-6 will be retained. N.B. B1 was originally due to be converted into two maisonettes, however following a structural survey this building now also requires demolition due to its poor condition and the presence of naphthalene in the flooring; a toxic substance which is to be appropriately disposed of following demolition.

1.2 Background

1.2.1 Ecus conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Bat Roost Assessment (PBRA) of the Site in June 2021 ('*Former Hoyle Ing Dyeworks, Linthwaite – Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment*' (ref. 17281, July 2021) at which time habitats and potential for protected species within the Site was recorded and the ecological value of the Site was assessed.

1.2.2 The Site was assessed for its suitability to support roosting, foraging and commuting bats in accord with current Bat Conservation Trust (BCT) guidance (Collins, 2016). The findings and recommended number of nocturnal surveys identified as appropriate to robustly establish bat status at the Site (during the July 2021 PEA and PBRA) are summarised in Table 1.

Table 1. Summary of Suitability for Roosting Bats at Site Buildings, Structures and Walls

Building Reference	Level of Suitability for Roosting Bats	Number of Recommended Nocturnal Surveys
B1	Moderate	2
B2, S1, W1-6	Low	1

1.2.3 Habitats at the Site were considered to display low suitability for foraging and commuting bats however given the nature of the habitats and that nocturnal surveys were due to be undertaken across the Site, it was considered that any foraging and commuting bat activity would be appropriately recorded, albeit incidentally, as part of the recommended nocturnal survey effort at the Site and so no specific or targeted survey effort in respect of foraging and commuting bats was recommended or deemed necessary.

1.2.4 This report details the findings of the nocturnal bat surveys undertaken at the Site by Ecus in August and September 2021. Methodologies employed during the surveys are described in full, along with the survey findings, evaluation and assessment. The requirement for any further ecological survey assessments and recommendations for mitigation and compensation measures are provided where appropriate.

2. Methodology

2.1 Nocturnal Bat Surveys

2.1.1 The June 2021 PBRA Site visit, established that B1 displayed moderate suitability for roosting bats. In accordance with best practice guidelines (Collins, 2016) for buildings with moderate suitability, two separate nocturnal bat survey visits are usually required and were commissioned for B1. The PBRA also established that B2, S1 and W1-6 displayed low suitability for roosting bats and in accord with best practice for buildings and structures with low suitability a single nocturnal survey visit was commissioned for B2, S1 and W1-6.

2.1.2 However, following the first nocturnal survey visit (dawn re-entry) a bat was recorded re-entering under a raised tile on B2 and so, in accord with current guidance for confirmed roosts, a further two nocturnal survey visits were undertaken at B2 (giving a total of three survey visits).

2.1.3 In addition, given that internal access into B1 was not possible and as bats were recorded in the vicinity of B1 during the first nocturnal survey visit (dawn re-entry), and to ensure robust results it was deemed appropriate to undertake an additional nocturnal survey visit at B1 (giving a total of three nocturnal survey visits).

2.1.4 The three nocturnal survey visits undertaken at B1 and B2 comprised one dawn re-entry survey and two dusk emergence surveys and were undertaken between August and September 2021.

2.1.5 S1 and W1-6 were subject to a single dawn re-entry survey, in accord with current guidance (Collins, 2016).

2.1.6 The surveys were overseen by a licensed bat surveyor. The survey effort employed accorded with the recommended nocturnal bat survey period which encompasses '*May to September with at least one of the surveys to be undertaken between May and August'* (Collins, 2016).

2.1.7 The nocturnal surveys were undertaken during clement weather conditions (temperatures of 10°C or above, dry and low wind) by between five and six surveyors equipped with full spectrum bat detectors. Surveyors were positioned to cover all elevations of the B1, B2, S1 and W1-6.

2.1.8 For the dusk emergence surveys, surveyors were in position for 15 minutes before sunset until 1.5 hours after sunset, with the dawn re-entry survey starting 1.5 hours before sunrise and finishing 15 minutes after sunrise. Bat activity including passes, foraging, roosting locations and species were recorded onto field maps, along with other incidental bat activity observed. The nocturnal surveys were digitally recorded to allow bat echolocation calls to be analysed using Kaleidoscope sound analysis software, with species identification confirmed with reference to bat call parameters presented in '*British Bat Calls: A Guide to Species Identification*' (Russ, 2012). Where identification of bat calls to species level was not possible, calls were identified to genus level only. Survey details are shown in Table 1 below, with surveyor locations and bat activity findings illustrated on Figure 1.

Table 1. Nocturnal Bat Survey Conditions

Date/ Time	Survey Number and Type	Surveyors	Air Temp. (^{o}C)	General Conditions	Detector Type
11.08.2021 04:09 –	Survey 1, Dawn re-entry	NF, KS, KT, JT, AB	Start: 12 End: 13	Dry, 70% cloud cover, very light breeze (Beaufort	Echo Meter Touch, Anabat Scout,

Date/ Time	Survey Number and Type	Surveyors	Air Temp. (°C)	General Conditions	Detector Type
05:54 hrs				Scale: 1) Sunrise: 05:39 hrs	Peersonic RPA3, Batscanner Stereo
25.08.2021 20:00 – 21:45 hrs	Survey 2, Dusk emergence	NF, KS, KT, CM, AB	Start: 17 End: 16	Dry, 5% cloud cover at start, 40% cloud cover at end, very light breeze (Beaufort Scale: 1) Sunset: 20:15	Echo Meter Touch, Anabat Scout, Peersonic RPA3, Batscanner Stereo
16.09.2021 19:07 – 20:52	Survey 3, Dusk Emergence	NF, KS, JT, AB, BL, FH	Start: 17 End: 15	Dry, 30% cloud cover at start, 0% cloud cover at end, very light breeze (Beaufort Scale: 1) Sunset: 19:22	Anabat Scout, Peersonic RPA3, Batscanner Stereo

NF – Natasha Firth, KS – Katie Smith, KT – Kate Twynham, AB – Anna Byatt, JT – Joe Travis, CM – Craig Midwinter, BL – Bronty Layton, FH – Fern Harrison

2.2 Survey Limitations

2.2.1 An internal inspection of B1 could not be undertaken during the nocturnal surveys due to it being considered unsafe to enter, due to known structural issues and the presence of naphthalene. B1 was subject to three nocturnal surveys in order to ensure a robust assessment of the suitability of this building for roosting bats could be established.

2.2.2 The Site was very overgrown with mature buddleia *Buddleja sp.* and birch *Betula sp.* particularly between B1 and B2 and around the southern gables of both buildings, which obscured parts of the lower floors of these buildings during the surveys. However given the survey effort undertaken, it is considered that a robust assessment of the current status of roosting bats has been carried out.

2.2.3 The nocturnal surveys have been undertaken in accord with current guidance and so are considered to provide a robust assessment of the current usage of the Site by roosting bats and, by foraging and commuting bats and so no bat activity transect surveys are required.

2.2.4 The detection range of a bat detector can be affected by atmospheric factors (including ambient temperature, relative humidity and air pressure), the bat species recorded and habitat factors (as a result of sound absorption and bat/habitat interactions). Bats with high frequency, quiet or directional calls (such as long-eared bats) may sometimes only be detected at distances less than 5 m. Bats with low frequency and loud calls such as noctules may be detected as far away as 100 m or more.

2.2.5 Identification of bat calls to species level is not always possible, as calls may be faint, of poor quality or contain sound elements including echoes or ambient noise. It is frequently difficult to differentiate calls of different bat species within the same genus due to overlapping bat call parameters. In particular there is considerable overlap between echolocation calls of bat species in the Myotis genus. As such, in the most part it has only been possible to identify recordings of Myotis bats to genus level only. Where bats have been identified as indeterminate pipistrelle species, the

echolocation call could not be confidently distinguished between common and soprano pipistrelle (i.e. not Nathusius' pipistrelle).

3. Findings and Evaluation

3.1 Nocturnal Surveys

3.1.1 B1, B2, S1 and W1-6 were subject to a programme of nocturnal dusk emergence and dawn re-entry surveys undertaken between August and September 2021 to determine the presence/likely absence of roosting bats within a given building/structure, in accordance with current guidelines (Collins, 2016).

3.1.2 The findings from the dusk emergence and dawn re-entry surveys, including surveyor locations and roost observations, are presented in Figures 1a-c, and summarised by building below. Photographs of roost locations are provided in Appendix 1.

B1

3.1.3 It was not possible to undertake an internal inspection of this building at any point during the surveys. Photographs from the structural survey were provided to Ecus by Highstone Building Services which showed that the upper floor was well lit and the lower floor/s appeared to be darker.

3.1.4 B1 was subject to a total of three nocturnal surveys. Whilst some bats were seen to fly in and out of the open windows of B1, no bats were considered to be roosting within this building. Bat activity was observed on all aspects of B1 and they were also seen to fly over the roof. The surveys recorded a number of echolocation calls with a moderate level of activity in the vicinity of B1.

B2

3.1.5 B2 was subject to a total of three nocturnal surveys. During the dawn re-entry survey on 11th August 2021, a brown long-eared bat was recorded flying around the ground floor of B2 before it was seen flying around the upper floor at 05:10. This bat was not seen to emerge from B2 and so it was considered likely that it was roosting on the upper floor of B2 although the precise roost location could not be confirmed at the time of survey. A common pipistrelle was observed to enter a gap at the roofline on the southern gable of B2 at 05:22. At the end of the survey the upper floor was inspected and scattered brown long-eared bat droppings were recorded, indicative of bats in flight.

3.1.6 During the dusk emergence survey on 25th August 2021, a common pipistrelle bat was seen to emerge from the southern gable of B2, from a raised tile at 20:46; this was considered to be the same location as that at which the common pipistrelle was seen to enter during the dawn re-entry survey. Two common pipistrelles were seen to emerge from the ground floor area of B2 at 20:40 through the large opening on the eastern aspect; these were considered to have taken a direct route from the south-western corner of the ground floor although an exact roosting location could not be confirmed. Surveyors observed a number of bats emerging from the upper floor windows however these were considered to have flown into B2 through another window and were not considered to be roosting in the building.

3.1.7 During the dusk emergence survey undertaken on 16th September 2021, two surveyors were stationed inside B2; one each on the ground floor and upper floor. A single common pipistrelle was recorded to emerge from a gap in the stonework in the south-western corner of the ground floor of B2 at 19:38. It then proceeded to forage around the ground floor before exiting through the opening on the western aspect and continuing to forage within the Site. A common pipistrelle was observed to emerge from beneath the raised tile on the southern gable of B2 at 19:45, in the same location as that recorded during the dawn re-entry and first dusk emergence survey. At 19:48 a brown long-eared bat was observed to emerge from a gap in the stonework in the north-western corner of the upper floor. This bat was seen to drop from above the window before flying down the stairs to the

ground floor area. This bat was not seen by the surveyors on the ground floor and outside B2, and so was considered to have exited the building through a doorway or window.

3.1.8 During the second dusk emergence survey, butterfly wings were recorded on the ground floor of B2 in the same location as the brown long-eared bat was seen flying on the dawn re-entry survey. These were considered to be feeding remains and were positioned under metal pipework and an exposed girder which were suitable feeding perches for the species.

3.1.9 General foraging activity recorded during the nocturnal surveys was spread across all elevations of B2, with the highest level of activity associated with the area of scrub to the west, and to south and east of B2. Echolocation calls recorded were attributed to common pipistrelle, pipistrelle sp. and brown long-eared bat.

S1

3.1.10 No bats were recorded returning to S1 during the single dawn re-entry survey conducted. Only very limited incidental activity was detected in the area of S1 during the nocturnal surveys of B1 and B2 with echolocation calls recorded originating from common pipistrelle. The limited activity seen and/or heard was concentrated to the south-east of the Site around the off-site mature trees.

W1-6

3.1.11 No bats were recorded returning to W1-6 during the single dawn re-entry survey conducted. Some, incidental albeit low, activity was detected in the area of W1-6 during the nocturnal surveys of B1 and B2 with echolocation calls recorded originating from common pipistrelle. The activity seen and/or heard was predominantly recorded around W3-6.

3.2 Foraging and Commuting Bats

3.2.1 Foraging and commuting activity was fairly constant during the first dusk emergence survey, with reduced activity during the dawn re-entry survey and second dusk emergence survey across much of the Site. Activity recorded primarily comprised common pipistrelle with up to two bats recorded at any one time. Foraging and commuting bat activity was therefore considered to be of a low level given the numbers and species of bat recorded at any one time.

4. Assessment and Mitigation

4.1 Proposals

4.1.1 As part of the proposed development at the Site, B1 and B2 will be demolished to facilitate the construction of 15 new residential dwellings, with associated infrastructure and landscaping. S1 and W1-6 will be retained.

4.2 Legislation

Roosting Bats

4.2.1 All species of bat occurring within the UK are included in Schedule 2 of the Conservation of Habitats and Species Regulations 2017 as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Under regulation 43 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).

4.2.2 All UK bats are also included on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) where it is an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.

4.2.3 Barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, brown long-eared bat, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *R. hipposideros*, noctule and soprano pipistrelle *Pipistrellus pygmaeus* bats are included as priority species within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

4.3 Assessment and Recommendations

Roosting Bats

4.3.1 The nocturnal surveys undertaken by Ecus during the 2021 bat activity season have identified that of the buildings and structures at the Site, only B2 currently supports bat roosts. A total of three roost locations and a brown long-eared bat feeding perch have been identified in this building as detailed in Figures 1a-c.

4.3.2 Common pipistrelle was recorded to be roosting in two locations in B2, both at the southern extent of this building. A single brown long-eared bat was recorded to be roosting in the stonework at the northern extent of this building. Of the roosts identified, none were observed to support greater than single bats on any given nocturnal survey visit. As such, the roosts recorded on the Site are considered to comprise day roosts used by individual or low numbers of bats. No evidence of any maternity colonies was identified within B2. The ground floor of B2 is also used by brown long-eared bat as a feeding location with feeding perch/es recorded within the darker area in the northern half of the building.

4.3.3 It is important to note that B2, S1 and W1-6 display suitability for hibernating bats and will be subject to two hibernating bat surveys during winter 2021/2022. This survey effort must take place before any potentially disturbing work including development related works commence at the Site. In the event that a bat hibernation roost is identified at the Site then this will contribute to the required bat mitigation and habitat compensation measures.

4.3.4 With reference to the Bat Mitigation Guidelines (Mitchell-Jones, 2004), taken in combination the bat roosts identified at the Site are considered to be of low conservation significance, comprising multiple day roosts used by individual or low numbers of common species.

4.3.5 Due to the confirmed presence of roosting bats within B2, demolition will need to proceed under a European Protected Species Mitigation Licence (EPS ML) or through registration on the Bat Mitigation Class Licence (BMCL) of a Registered Consultant, as appropriate. Any bat licence application can only be completed following receipt of the necessary consents (i.e. planning permission) with all conditions relating to wildlife discharged. The BMCL route is suitable for buildings which support a small number of common bat species roosts and has a faster turnaround by Natural England than a full EPSML application: the appropriate licensing route can only be determined when full details of bat roosting activity associated with the buildings have been characterised although current data indicated that BMCL is likely to be appropriate.

4.3.6 An EPSML or BMCL would include the production of a bat mitigation strategy for the Site, detailing measures to avoid death or injury to bats during the demolition works. Appropriate working methods will need to be employed under the licence during Site clearance and will likely need to include the following outline measures:

- A toolbox talk by a licensed bat ecologist for all Site operatives involved in the works to highlight the potential presence of bats and what to do if they are encountered;
- Pre-works dawn re-entry surveys prior to demolition to identify bats returning to roosts within the building;
- 'Soft' demolition of bat roosting features (e.g. hand removal of roof tiles or other features) to be directly supervised by a licensed bat ecologist or BMCL consultant, with any bats captured and relocated safely; and,
- Provision of new bat roosting facilities within new buildings (i.e. building integrated bat boxes or a bat loft (dependent on number and species of bats) or attached to retained trees.

4.3.7 As the identified day roosts will be lost, long term compensation is to be installed within the new development to ensure continuous roost provision for bats and to compensate for the loss of roosts and roosting opportunities within B2. Boxes will be integrated within the fabric of new buildings and located at a minimum of 4 m from the ground and preferably at eaves level, with clear flight lines from the boxes avoiding clutter and lit areas. Compensation and, in order to enhance the post-development Site's suitability for roosting bats, provision will include no less than 5 building integrated bat boxes e.g. integral Schwegler 1FR bat tubes or Habibat bat boxes (these are available in a variety of finishes to suit the aesthetic of the new houses). This will provide roosting provision for bats on 30% of properties.

4.3.8 The boxes will be positioned to face onto areas of suitable foraging habitat where practical, namely around W1-6, above which are vegetated habitats including mature trees. The majority of boxes will be positioned on southerly facing aspects which are favoured by roosting bats, with some boxes on east and west facing aspects to increase the variety of microclimates available to bats and increase the likelihood of occupation.

4.3.9 Monitoring of new roost provision at the Site may be required to determine uptake by roosting bats and identify where maintenance may be required.

4.3.10 The outline mitigation strategy detailed above will contribute to meeting the recommended mitigation requirements, with full details to be provided within the Natural England licence application.

4.3.11 No bat roosts were identified as present at B1 during the nocturnal bat survey visits therefore it is considered unlikely that roosting bats are associated with this building. However given the presence of bat roosts in the adjacent B2, and that an internal inspection was not possible, it is recommended that a precautionary approach is taken when demolishing the building. This is advised because bats can move between roost locations and may explore new roosting locations within the vicinity of an existing roost.

4.3.12 The precautionary approach would include provision of a toolbox talk to personnel on Site during the demolition works and sensitive working practices, including initial supervision of contractors by a suitably qualified ecologist when removing/dismantling PRFs identified at the building. In the event that a bat is discovered to be roosting then the ecologist will determine the most appropriate course of action.

4.3.13 It is considered that the findings of this report will remain valid for a period of two years from the date of its production. In the event that demolition does not proceed within two years or there are considerable changes to the building within this timeframe, an update to this survey report will be required.

Foraging and Commuting Bats

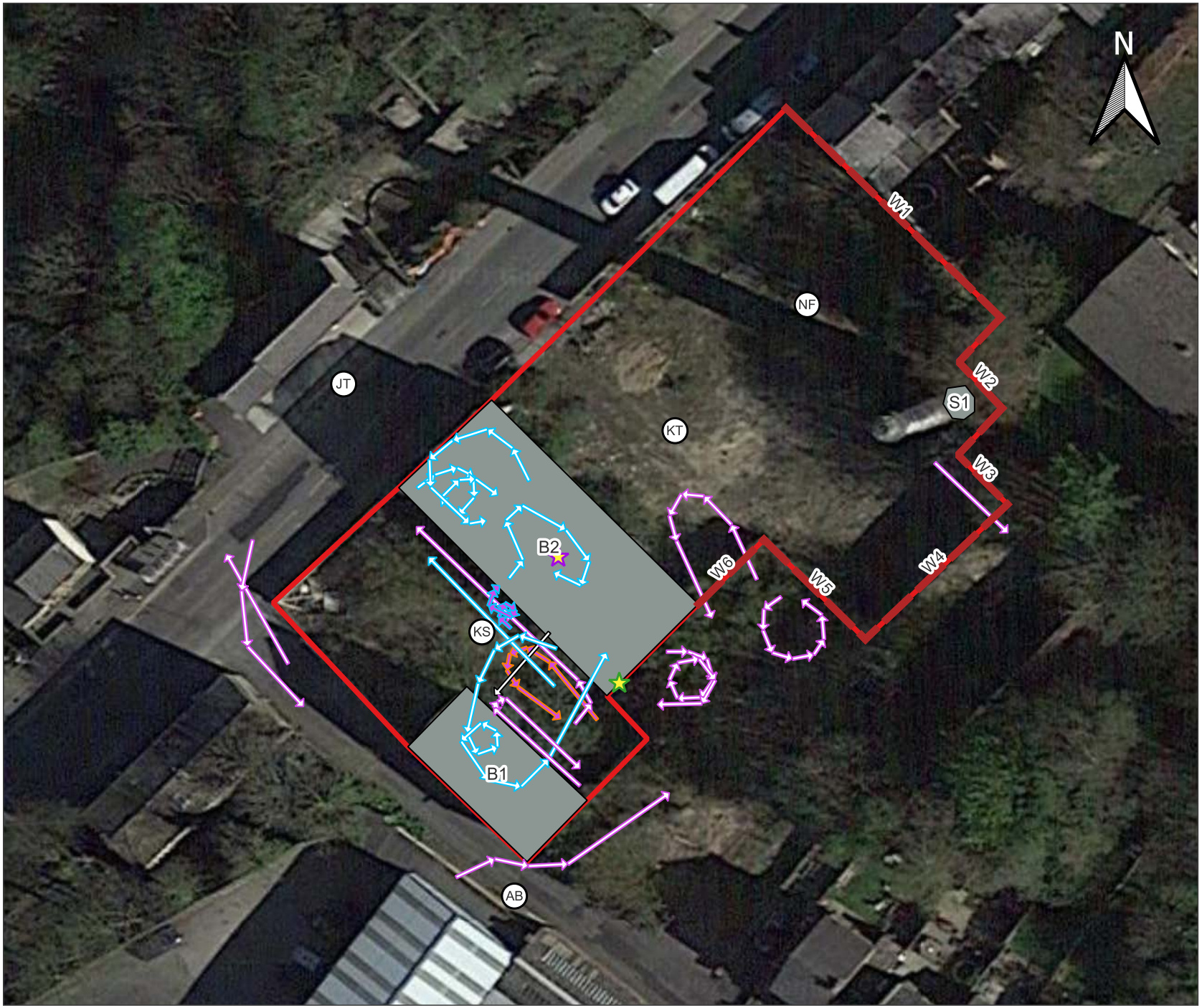
4.3.14 No additional lighting will be installed around S1 and W1-6. To maintain the value of the Site for commuting and foraging bats in the long term post-construction, a sensitive lighting scheme will be designed which avoids any direct lighting of or light spillage onto these boundary features, and of new habitat to be created on Site. Given the presence of light avoiding species at the Site, including brown long-eared bat, any light spill onto boundary features and retained and new habitat will be limited to a maximum of 3 lux (Guidance Note 08/18, BCT ILP). The lighting strategy should be developed by a lighting engineer in close consultation with an ecologist at an early stage in the design to ensure that foraging and commuting bats are not adversely impacted by lighting at the Site during and post-development.

5. References

Collins, J (ed) (2016). *'Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn)'. The Bat Conservation Trust (BCT), London. ISBN-13 978 872745-96-1.

Mitchell-Jones, T (2004) '*Bat Mitigation Guidelines'.* English Nature, Peterborough. ISBN 1 85716 781 3.

Figures 1a-c. Nocturnal Bat Survey Results



Legend

- Site Boundary
- Building
- Walls
- Surveyor Locations

Roost Location

- External Roost
- Unidentified Internal Roost

Bat Flight Paths

- BLE
- BLE, PPip
- PPip
- PPip, Pip sp.
- Unknown

Species Codes:
BLE - Brown long-eared
PPip - Common pipistrelle
Pip sp. - Pipistrelle species

0 10 20

Highstone Building Services

Hoyle Ing Bat Surveys

Figure 1a
Bat Survey Findings - Dawn 11.08.2021

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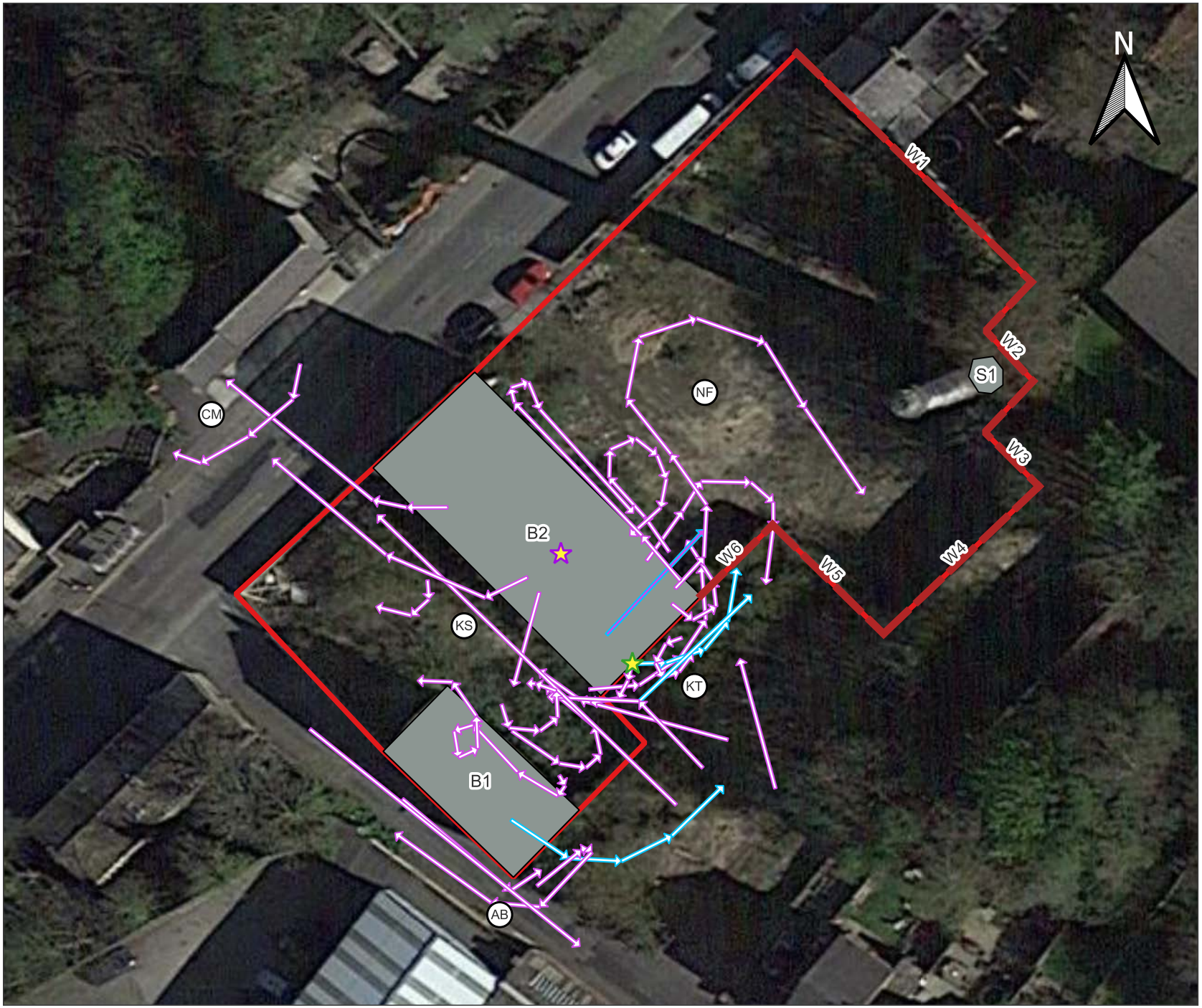

Legend

- Site Boundary
- Building
- Walls
- Surveyor Locations

Roost Locations

- External Roost
- Unidentified Internal Roost

Bat Flight Paths

- BLE
- BLE, PPip
- PPip

Species Codes:
BLE - Brown long-eared
PPip - Common pipistrelle

0 10 20

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Hoyle Ing Bat Surveys

Figure 1b
Bat Survey Findings - Dusk 25.08.2021

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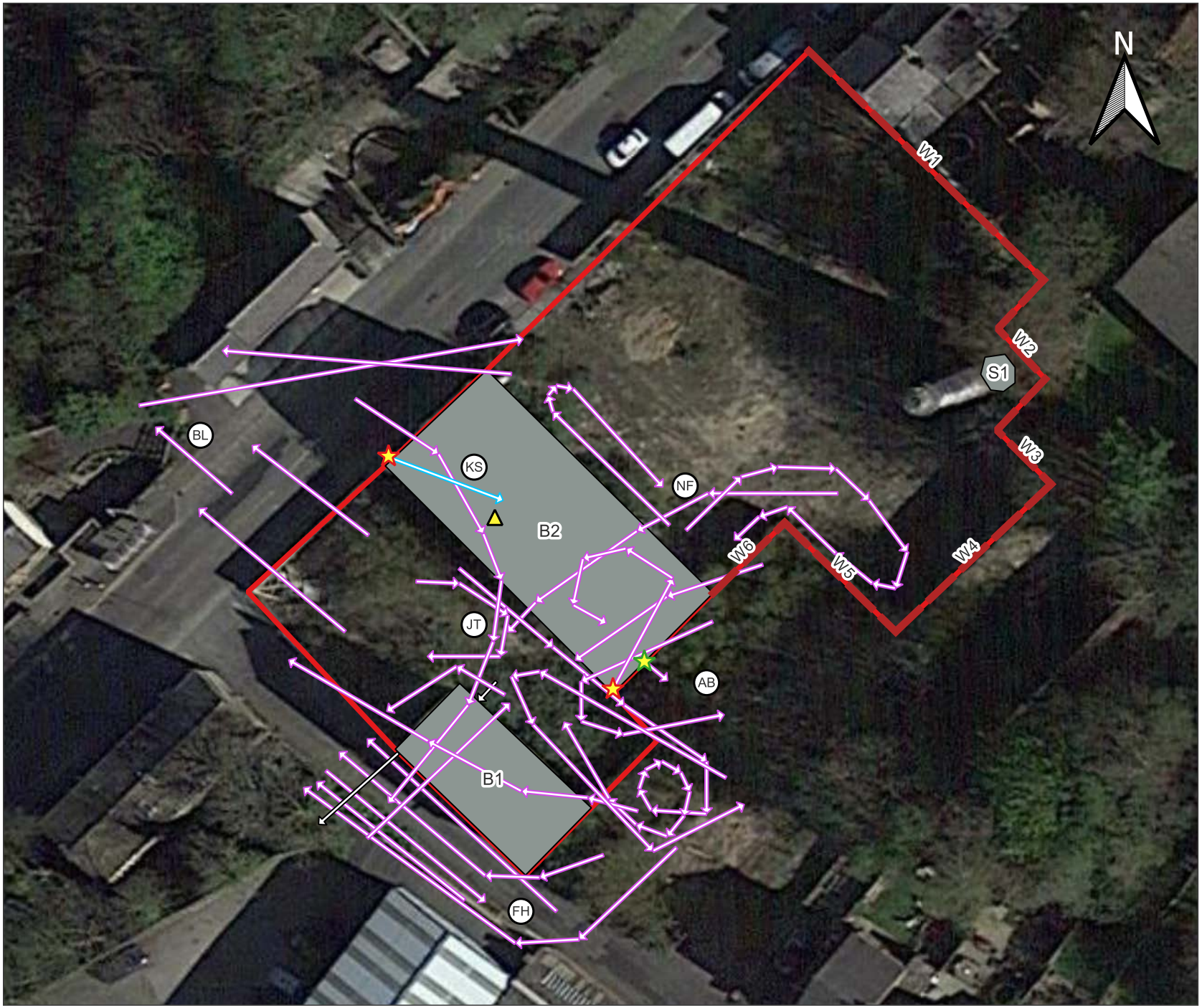
Date: October 2021 | Scale 1:800 | @A3 | Drg.Ref: KT/17499/F1b



Legend

- Site Boundary
- Building
- Walls
- Surveyor Locations

Roost Locations

- External Roost
- Internal Roost
- Unidentified Internal Roost
- Brown Long Eared Feeding Perch - Internal

Bat Flight Paths

- BLE
- PPip
- Unknown

Species Codes:
BLE - Brown long-eared
PPip - Common pipistrelle

0 10 20

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Hoyle Ing Bat Surveys

Figure 1c
Bat Survey Findings - Dusk 16.09.2021

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Appendix 1. Site Photographs







Plate 1 View of brown long eared bat roost in gap in stonework at north-western extent of the upper floor of B2.

Plate 2 View of common pipistrelle roost beneath raised tile on southern gable of B2.

Plate 3 View of common pipistrelle roost location in gap in stone-work at the south-western extent of the ground floor of B2.

October 2021

Highstone Building Services Ltd.

Former Hoyle Ing Dyeworks, Linthwaite
Nocturnal Bat Survey

Appendix 1: Site Photographs

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Plate 4	View of brown long-eared bat feeding remains on ground floor of B2.
Plate 5	View of brown long-eared bat feeding remains on ground floor of B2.
Plate 6	View of brown long-eared bat droppings collected from upper floor of B2. These were not sent for DNA analysis as Ecus surveyors were confident of the ID.
Plate 7	View of piping and girders above feeding remains, which are considered to be brown long-eared bat feeding perches.

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Appendix 1: Site Photographs

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