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Bat Presence/Likely-absence Survey

Report Prepared on behalf of Mr Guy Evans of Cassidy & Ashton

For the site of
Gamford Farm, Gamford Lane, Rossett, Wrexham LL12 0EW

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Bat Presence/Likely-absence Survey

EXECUTIVE SUMMARY

Background to Survey

The client, Mr Guy Evans of Cassidy & Ashton has commissioned Arbtech Consulting Ltd. to undertake a full suite of emergence surveys to confirm bat presence/likely-absence¹ at a farm and associated buildings and land at Gamford Farm, Gamford Lane, Rossett, Wrexham LL12 0EW. The proposed plans involve demolition and renovation of buildings on site.

The Survey builds upon a Preliminary Roost Assessment undertaken by TEP on 11th June 2015.

Summary of Recommendations

A full suite of emergence surveys have been undertaken to confirm presence/likely-absence of bats, in accordance with industry standard guidelines (Hundt 2012).

Bat roosts have been confirmed in the structures. It is assessed that there is a high likelihood that the proposals pose a significant risk of harm, disturbance or damage to bats or their roosts, without mitigation.

It is considered that the proposals will need to be permitted by a Conservation Regulations Licence to be obtained from Natural Resources for Wales (NRW), once planning approval is granted.

Sufficient information is provided so that the Local Planning Authority (LPA) can make a consenting decision in accordance with the obligations placed upon it under The Conservation of Habitats and Species (Amendment) Regulations 2012.

¹ It is not currently scientifically possible to prove an absence so an assessed absence is usually referred to as a "likely-absence".

Summary of Potential Mitigation, Potential Impact, Loss and Gain

Bat Species	Potential impact/loss?	Potential mitigation required	Potential ecological gain?
Common Pipistrelle	Loss of roost Damage or alterations to roost Disturbance Direct harm to any bats present during work	Under licence: Supervision of roof strip by ecologist. Replacement roosting provision.	Under EPS Licence replacement roosting provision will be installed in the form of bat boxes, access tiles and/or access tubes. Additional roosting provision could also be installed in order to further enhance roosting habitat on site. Planting of insect-attracting plants would also enhance bat foraging habitat on site.

1.0 The Company and Contact Information

Established in 2005, Arbtech Consulting Limited provides arboricultural and ecological consultancy services in respect to planning and development, throughout the UK.

Tel 01244 660558

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2.0 The Lead Surveyor

The lead surveyors are Amy Champion BSc(Hons) and James Porter BSc(Hons) MSc MCIEEM. The principal author of this report is James Porter.

2.1 Other Surveyors

Ben Stanley

Emma Coulthard

Paul Sheridan

Joshua Humphries

Chris Guggiari-Peel

3.0 Bat Licences

The lead surveyor holds a relevant Scientific Bat Licence with Natural Resources for Wales (NRW) for the undertaking of this type of survey.

4.0 The Client

The client is Mr Guy Evans of Cassidy & Ashton.

5.0 The Site of Proposed Development

The client is preparing a planning application to demolish and renovate buildings on site at Gamford Farm, Gamford Lane, Rossett, Wrexham LL12 0EW.

6.0 The Survey Brief

The client has commissioned Arbtech Consulting Ltd. to undertake a full suite of emergence and re-entrance surveys to confirm bat presence/likely-absence, in accordance with best practice as set out in BCT Bat Survey Guidelines.

7.0 Limitations

This survey can only ever provide a limited 'snap-shot' of the current value of the structures for roosting bats at the times of the surveys. However, the survey effort across the site included surveys through August and September, and from numerous locations around all buildings, and is considered sufficient to inform an assessment of impacts on the local conservation status of bats at the site.

8.0 Data Searches

A 1km data search was obtained for the ecological assessment (including in the Preliminary Roost Assessment report undertaken by TEP on 11th June 2015).

9.0 Dates of the Survey

18th August 2015 (PM); 24th August 2015 (PM); 25th August 2015 (PM); 31st August 2015 (PM), 21st September 2015 (PM); 22nd September 2015 (PM); 23rd September 2015 (PM) and 24th September 2015 (PM).

10.0 Seasonality

This type of assessment can be conducted during the period May to September inclusive, with the optimal season for surveying maternity colonies limited to mid-May to August inclusive (Hundt, 2012). .

11.0 Legislation and Planning Policy

Table 1: Summary of Pertinent Legislation and Planning Policy Relevant to the Protection of Bats in Wales

This table is adapted from Table 2.1 and Section 2.5 of the Bat Surveys—Good Practice Guidelines.

Location of Roost	Transposing EC Habitats Directive	Other Relevant Legislation	Planning Policy
Wales	Conservation of Habitats and Species Regulations 2010. The Conservation of Habitats and Species (Amendment) Regulations 2012	Wildlife and Countryside Act 1981 as amended. Countrywide and Rights of Way Act 2000. Natural Environment and Rural Communities Act 2006.	Technical Advice Note ("TAN") 5.

Cumulatively, this legislation makes it illegal to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.

A bat roost is defined by Hundt as “the resting place of a bat”. Generally however, the word roost is interpreted to mean “any structure or place, which any wild bat uses for shelter or protection.”

12.0 The Survey Methodology

In order to fully assess the potential value of bat habitat at the site, the survey is based upon widely accepted, industry best-practice standards set out in the BCT Bat Survey Guidelines.

The survey involved the observation of all elevations of the structures by suitably experienced bat surveyors. The surveyors utilised broadband bat detectors to assist with the bat recording.

Inspections were both internal (where possible) and external, and made use of

- Torches
- Broadband Bat Detectors
- Thermometers/hygrometers/anemometers
- Mirrors
- Binoculars

The aims of the survey were:

- To find or record the emergence of bats from a building or built structure.
- To find roosts by tracking back bat flight paths or observing dawn flight activity at roosts.
- To determine presence/likely-absence of species i.e. the species present in a given area.
- To determine the intensity of bat activity both spatially and temporally i.e. to help estimate bat populations.
- To determine the type of activity, most usually foraging (e.g. by feeding buzzes), commuting (e.g. by high directional pass rates) and mating (e.g. by mating social calls).
-

As bats were found during the survey, this report has made recommendations for further survey work and mitigation, consistent with national guidelines, and assessed appropriate by the surveyor in the context of the proposal.

13.0 Previous Survey Findings

The site was the subject of a Preliminary Roost Assessment (PRA) conducted by TEP on 11th June 2015. This evaluated the suitability of the buildings for roosting bats, provided recommendations on the scope of further surveys, informed the positioning of surveyors and highlighted features with potential as access/egress points in the buildings. Notably, the main house was assessed as comprising high potential suitability for roosting bats. The tree on the southern boundary of the site has been assigned as “Category 2” (under Bat Conservation Trust guidelines) in terms of its potential to support roosting bats, however, it is not anticipated that this tree will be affected by the proposals.

14.0 Dates of the Bat Emergence Surveys

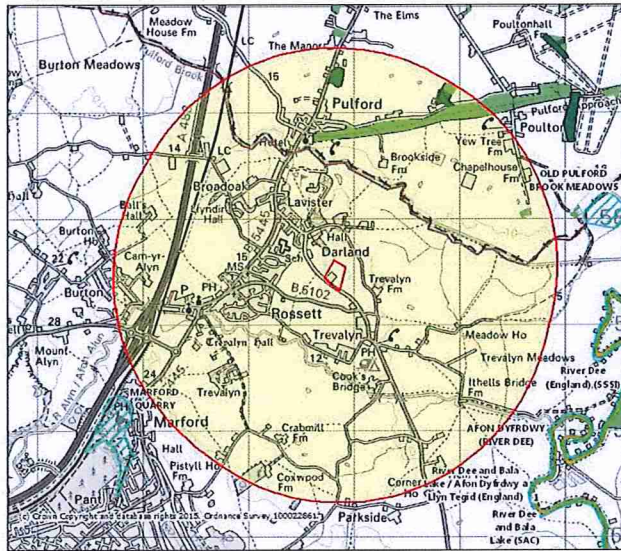
Table 2: Survey Dates, Times and Weather Records

Date	Survey	Time: from/to	Weather: Start	Weather: Finish
18/08/2015	Dusk	8:00 pm - 10:05 pm	Temp: 19 °C Humidity: 60% Cloudy: 35% Wind: 1/8 Rain: None	Temp: 16 °C Humidity: 62% Cloudy: 20% Wind: 1/8 Rain: None
24/08/2015	Dusk	7:50 pm - 9:50 pm	Temp: 17 °C Humidity: 72% Cloudy: 30% Wind: 1/8 Rain: None	Temp: 14 °C Humidity: 82% Cloudy: 30% Wind: 0/8 Rain: None
25/08/2015	Dusk	7:45 pm - 9:50 pm	Temp: 16 °C Humidity: 88% Cloudy: 100% Wind: 0/8 Rain: Light rain showers	Temp: 16 °C Humidity: 64% Cloudy: 20% Wind: 1/8 Rain: None
31/08/2015	Dusk	7:30 pm - 9:35 pm	Temp: 15 °C Humidity: 76% Cloudy: 100% Wind: 1/8	Temp: 14 °C Humidity: 77% Cloudy: 20% Wind: 1/8

			Rain: None	Rain: None
21/09/2015	Dusk	7:00 pm - 9:00 pm	Temp: 14 °C Humidity: 75% Cloudy: 30% Wind: 1/8 Rain: None	Temp: 11 °C Humidity: 79% Cloudy: 20% Wind: 1/8 Rain: None
22/09/2015	Dusk	6:50 pm - 8:50 pm	Temp: 14 °C Humidity: 72% Cloudy: 30% Wind: 1/8 Rain: None	Temp: 12 °C Humidity: 82% Cloudy: 30% Wind: 2/8 Rain: None
23/09/2015	Dusk	6:45 pm - 8:50 pm	Temp: 14 °C Humidity: 94% Cloudy: 70% Wind: 0/8 Rain: None	Temp: 13 °C Humidity: 94% Cloudy: 35% Wind: 1/8 Rain: None
24/09/2015	Dusk	6:30 pm - 8:35 pm	Temp: 13 °C Humidity: 86% Cloudy: 40% Wind: 2/8 Rain: None	Temp: 11 °C Humidity: 90% Cloudy: 40% Wind: 3/8 Rain: None

15.Results of the Desk Study

Table 3: Desk study results. Buildings referred to by number and in accordance with the sketch plan at Appendix 1.

Desk Study Records	The survey preparation has been informed by the use of a desk study utilising: - aerial images from Google Earth, MAGIC and other freely available information e.g. Natural England's nature on the map website, and OS Opendata 2010 using grid reference SJ377574 and postcode LL12 0EW. MAGIC Gamford Farm, Gamford Lane, Rossett  search has been conducted as part of this assessment as it was previously obtained from Cofnod and published in the report for an Ecological Assessment (including Preliminary Roost Assessment) conducted by TEP on 11th June 2015.
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Local Environment	Site Location: The site is located to the east of Rossett, which is situated between Chester and Wrexham. The site is surrounded by open farmland connected by a network of hedgerows; these hedgerows link to an area of woodland which surrounds a large body of open water to the north-west. This comprises excellent foraging resource for bats. The following habitat features for bats are present:	
	Landscape Features suitable for bat use	Present within 2km + notes (distances)
	Water Courses	Pulford Brook 0.98km North
	Woodlands	Hedgerows directly connect the site to Darnell Wood LWS approximately 0.4km north-east of the site.
	Linear Features e.g. tree lines, hedges, gardens	The site is surrounded by open farmland connected by a network of hedgerows.
	Pasture	Pasture is present immediately adjacent to site.

16.0 Survey Results

Table 5: Buildings referred to by number and in accordance with the sketch plan at Appendix 1 and photographs at Appendix 2.

Surveyors: A: Emma Coulthard B: Paul Sheridan C: Joshua Humphries D: Chris Guggiari-Peel E: James Porter F: Amy Campion G: Ben Stanley				
Surveyor Initials	Building Ref Identified on sketch plan at Appendix 1	Dates and Times	Records of Significant Bat Activity	Roost Status: Emergence (Black) Activity (Amber) No Activity (Green)
18/08/2015 Sunset: 20.33				
A	House	20.00 - 22.10	Common pipistrelle (CP) <i>Pipistrellus pipistrellus</i> emerged from near the apex of the SE gable 21.07, 21.09 and 21.17. CP heard and occasionally seen foraging along the hedgerow from 21.00 until 21.27. Much of this activity was feeding at east corner of house and in field near oak tree. A Noctule (<i>Nyctalus noctula</i>) was heard but not seen at 21.05.	Emergence
B	House	As above	CP observed foraging along hedgerow at 20.52, 20.58, 21.10, 21.22 and 21.39. Max count was 4 at any one time. A single CP was observed to enter into the building through the apex of the SE gable at 21.22. N heard but not seen at 21.05.	Entry
C	House	As above	CP heard and occasionally seen commuting across site, mainly	Activity

			from north to south, from 21.01 until 21.39. CP observed flying onto site from north, and foraging close to the building from 21.03 until 21.10.	
24/08/2015 Sunset 20.20				
B	B2	19.50 - 22.20	CP and Soprano pipistrelle (SP) <i>Pipistrellus pygmaeus</i> were heard commuting and foraging from 20.41 until 21.58. Activity on site commenced from 20.30, with both species foraging alongside B2, looping around the building, generally from east to west, until 21.18.	Activity
C	B2	As above	CP and SP heard feeding over the grounds and passing by from 20.37 until 21.43. Foraging activity occurred close to the building, but no emergences were observed. Max count was 3 at any one time.	Activity
25/08/2015 Sunset 20.18				
A	B3	19.45 - 21.50	CP flew onto site from north (over the building) at 20.39 and foraged on the western side of the building until 20.59. Continuous CP activity from 20.47 until 21.52, mainly associated with the hedgerow by the road. SP passes from north to south at 21.03 and 21.15. N heard but not seen at 21.44.	Activity
B	B3	As above	Occasional CP activity from 20.51 until 21.48, mainly associated with the hedgerow by the road. SP pass from north to south 21.15. N heard but not seen at 21.44.	Activity
31/08/2015 Sunset 20.04				
A	House	19.30 - 21.40	Occasional CP activity from 20.19 until 20.28, mainly associated	Activity

			with the hedgerow by the road. SP pass from east to west at 20.48. N heard but not seen at 20.49.	
B	House	As above	CP passed from N to SW, to the west of the main house at 20.24. CP foraged along hedgerow by road from 20.41 until 20.25. SP heard but not seen at 20.48 and 21.12. N heard but not seen at 20.49.	Activity
C	House	As above	CP heard and occasionally seen commuting across site, mainly from north to south, from 20.11 until 20.07. CP observed flying onto site from north, and foraging close to the building from 20.20 until 21.02.	Activity
21/09/2015 Sunset 19:14				
F	B9	19:36 - 20:18	Common pipistrelle <i>Pipistrellus pipistrellus</i> constant activity behind B9. Soprano pipistrelle <i>Pipistrellus pygmaeus</i> pass north west to south east past B9 at 19:39. Soprano pipistrelle distant pass from other side of farm. Common pipistrelle constant activity heard but not seen. Soprano pipistrelle constant activity heard but not seen.	Activity
G	B9	19:39 - 20:05	Common pipistrelle <i>Pipistrellus pipistrellus</i> constant activity. Common pipistrelle passes x 2 headed from main house at 19:47. Several Soprano pipistrelle distant passes, not seen.	Activity
22/09/2015 Sunset 19:11				
F	B5	19:29 - 19:55	Common pipistrelle pass north east to south west down the side of B5 at 19:29. Common pipistrelle constant activity down the side of B5.	Activity

			Soprano pipistrelle pass south west to north east at 19:32. Common pipistrelle and Soprano pipistrelle constant activity up until 19:55.	
G	B5		Common pipistrelle constant activity and foraging in front of me from 19:30 - 19:52. Common pipistrelle passes x 2 heard but not seen. Common pipistrelle constant activity and foraging in front of me from 19:57 - 20:02. Common pipistrelle passes heard but not seen 20:04-20:09.	Activity
23/09/2015 Sunset 19.09				
B	House	18.52 - 20.40	CP emerged from under roof tiles on the SE gable end and flew away to the W at 19.27. Occasional CP observed foraging along hedgerow, in both directions, from, 19.22 until 20.08.	Emergence
D	House	As above	CP heard and occasionally seen commuting across site, mainly from north to south, from 19.13 until 19.54. CP observed flying onto site from north, and foraging close to the building from 19.32 until 19.48.	Activity
E	House	As above	CP emerged from under roof tiles on the SE gable end and flew away to the W at 19.27.	Emergence
F	B6	19:31 - 20:03	Common pipistrelle pass north east to south west around B6. Common pipistrelle passes heard but not seen from 19:40 - 20:03.	Activity
G	B6	19:32 - 19:39	Common pipistrelle pass from behind - not seen. Common pipistrelle pass north east to south west around B6 at 19:35 & 19:39.	Activity
24/09/2015 Sunset 19:01				
F	T1	19.19 - 19:56	Soprano pipistrelle pass - not seen.	Activity

			Soprano pipistrelle foraging/constant activity around tree at 19:30 - 19:50. Common pipistrelle distant pass at 19:55, not seen.	
G	T1	19:22 - 20:00	Soprano pipistrelle constant activity & foraging around trees at 19:22 - 19:34. Soprano pipistrelle constant activity/passess heard but not seen from 19:38 - 20:00.	Activity

Bat activity maps and surveyor locations are found at Appendix I.

17.0 Conclusions and Recommendations

It has been confirmed that bats are roosting in the main house. However, features suitable for bats exist in buildings across the site and although sufficient survey effort has been made to confirm likely absence, a precautionary approach to demolition is recommended to minimise the risk of impacts on bats incidentally and infrequently using other buildings and features.

Table 6: Conclusions and recommendations. Buildings and Trees referred to by number and in accordance with the sketch plan at Appendix I.

Building Ref Identified on sketch plan at Appendix 1	Was the roost confirmed?	Will the development affect the roost?	Roost significance Graded per Natural England Guidance	What recommendations and mitigation are appropriate?	Is a European Protected Species Licence necessary?
House	Unconfirmed ☐ Further survey work required ☐ Confirmed ☒	Yes. The roost will be lost.	Low ☒ Moderate ☐ High ☐	Mitchel-Jones (2004) defines the conservation value of bat habitats and roosts and makes proposals for mitigation that are appropriate to: the species of bat(s); the population using the roost; and the roost's status e.g. maternity, pre-breeding summer roost, <i>hibernacula</i> , etc.	Yes ☒ No ☐

	A max count of 1 CP emerged from under roof tiles on the SE gable end.			We recommend: Replacement roosting provision will be installed in the new building, either bat access tiles or bat tubes. The roof and eaves are removed by hand under ecological supervision. Bat boxes are installed on the retained buildings or trees. These should be a minimum of 3m above ground level and face south or south-westerly A mitigation method statement detailing the design and execution of bat mitigation, as well as any pre-cautionary measures e.g. ecological supervision, is submitted to Natural England as part of an EPS licence application.	
Buildings 1, 3 and 5	Likely absence confirmed	Very unlikely		The roof and eaves are removed by hand under ecological supervision.	

18.0 Bibliography

- Hundt L (2012) Bat Surveys: Good Practice Guidelines, 2nd edition, Bat Conservation Trust ISBN-13: 9781872745985
http://www.bats.org.uk/publications_detail.php/1127/bat_surveys_good_practice_guidelines_2nd_edition
- National Planning Policy Framework, 2012
<http://www.communities.gov.uk/publications/planningandbuilding/nppf>
- Mitchell-Jones, A. J. (2004), Bat Mitigation Guidelines. English Nature.
- Office of the Deputy Prime Minister (2005). Circular 06/2005: Biodiversity and Geological Conservation. Para.99
<http://www.communities.gov.uk/documents/planningandbuilding/pdf/147570.pdf>

19.0 Document Production and Approval

Status	Issue	Author/Reviewer	Date
Draft	1	James Porter	13/10/2015
Reviewed Draft	1	Julie Powell	19/10/2015
Draft	2	Julie Powell	27/10/2015
Final	2	James Porter	02/11/2015

20.0 Limitations

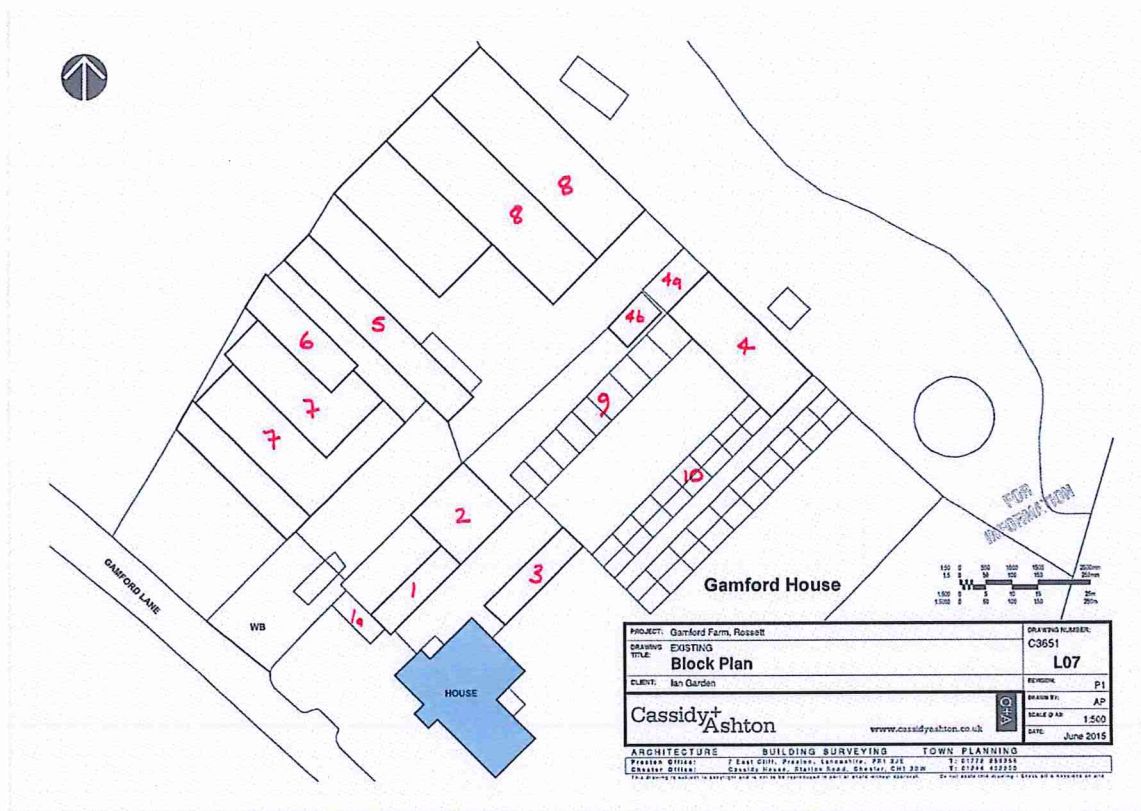
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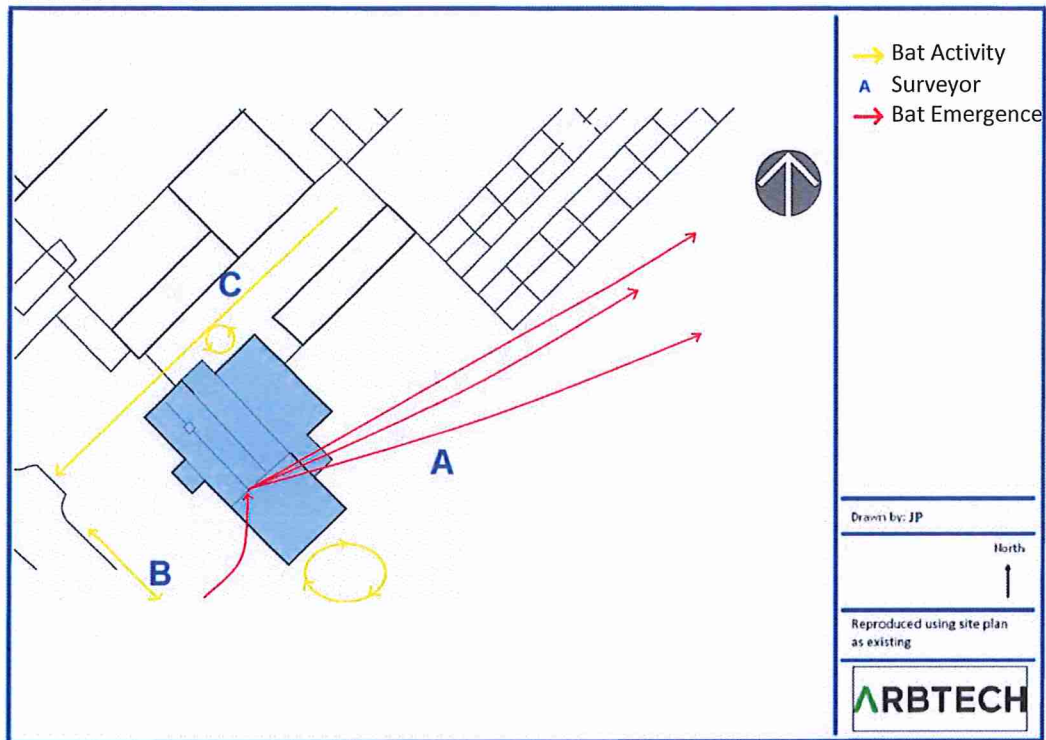
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Appendix 1 Plans

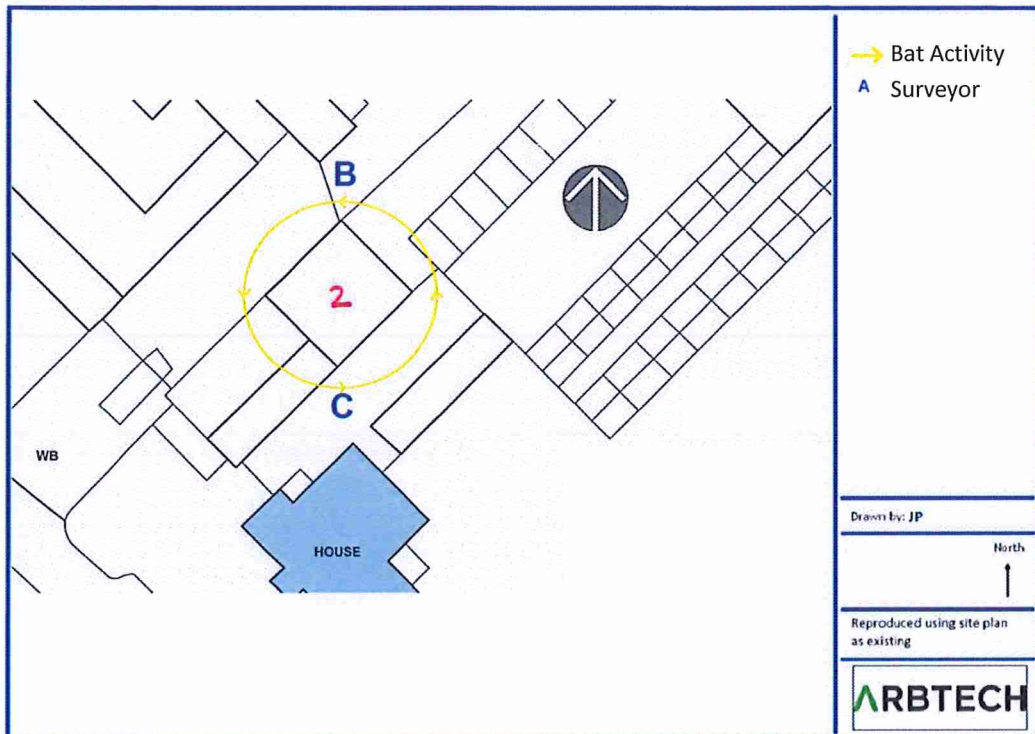
Site Plan



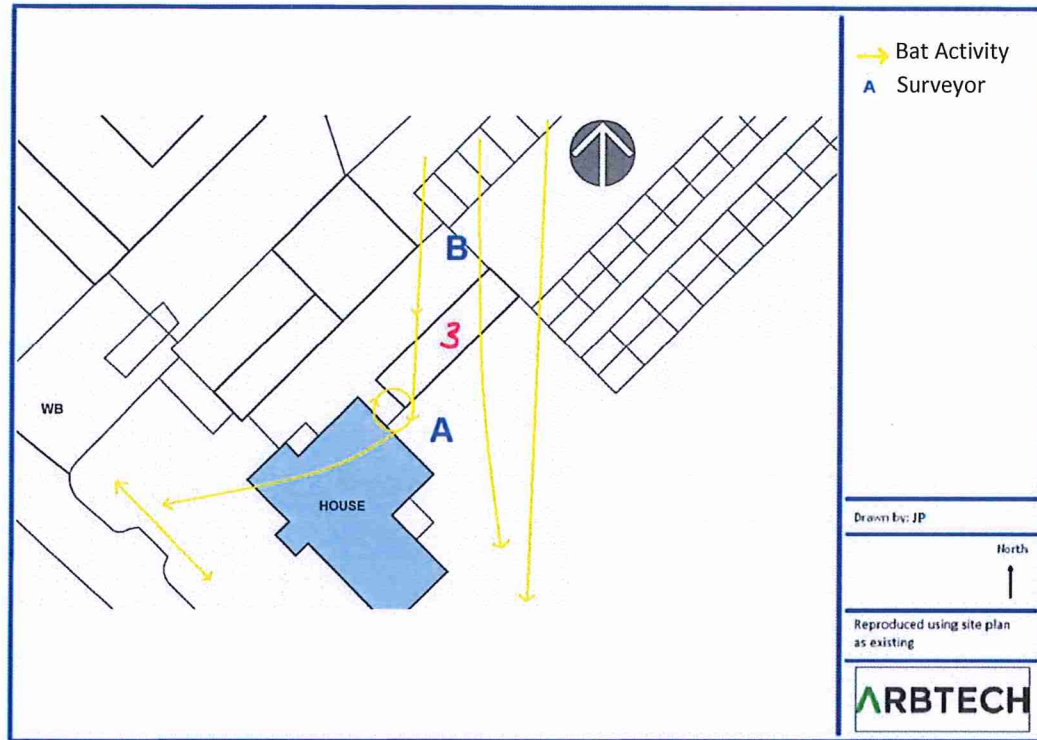
18/08/2015 - House



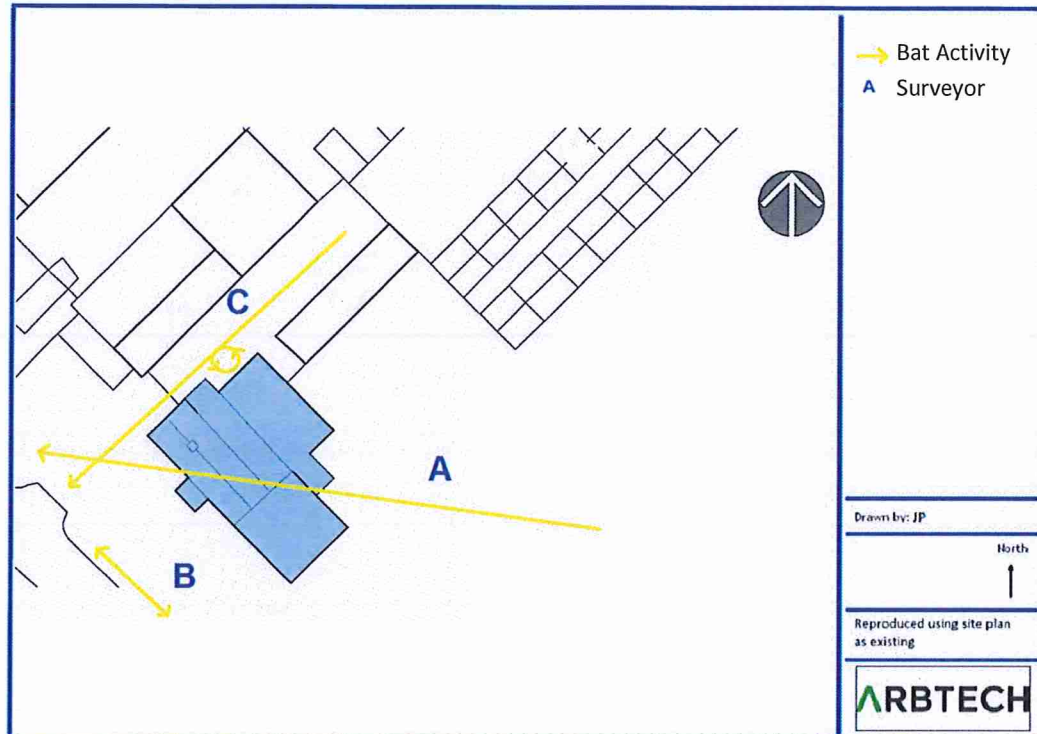
24/08/2015 - B2



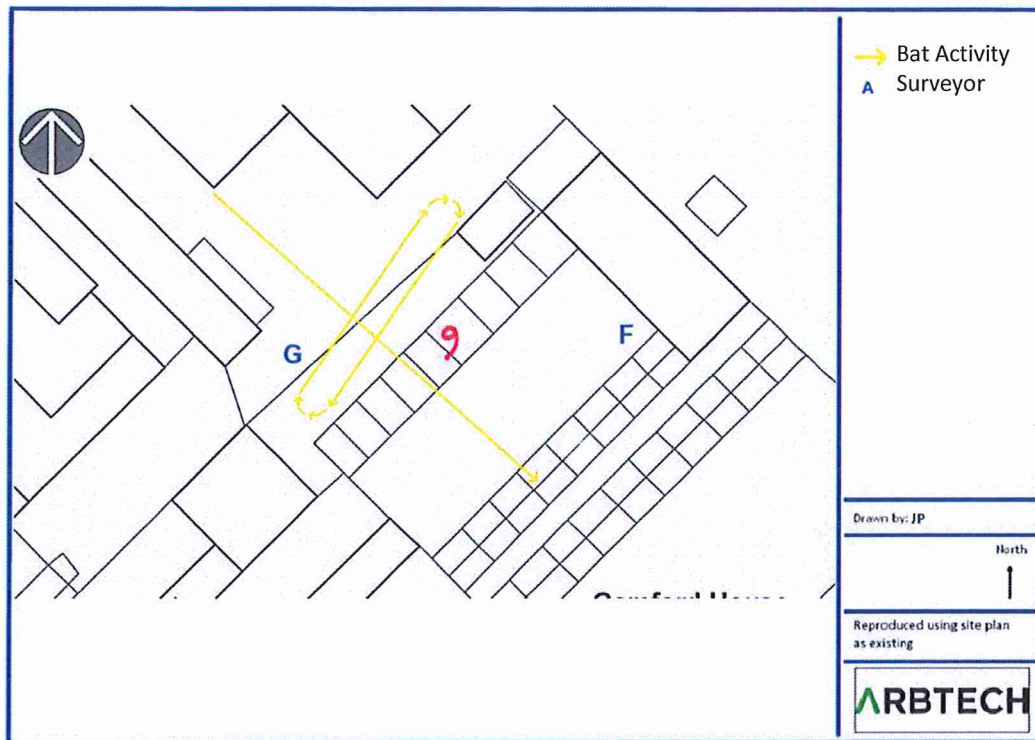
25/08/2015 - B3



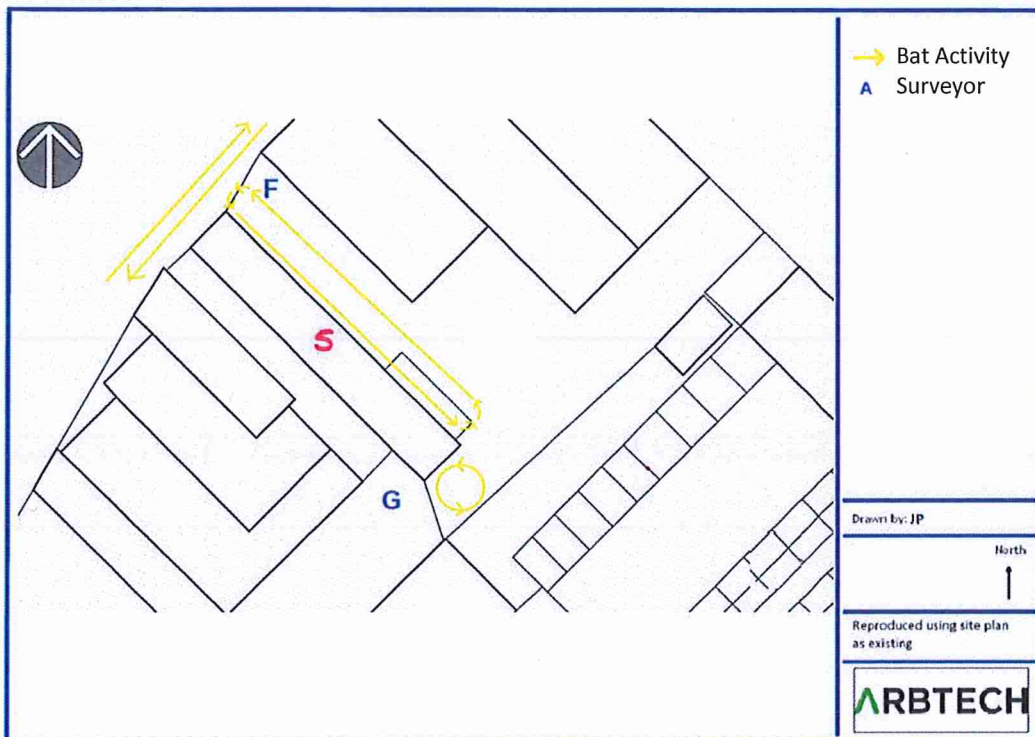
31/08/2015 - House



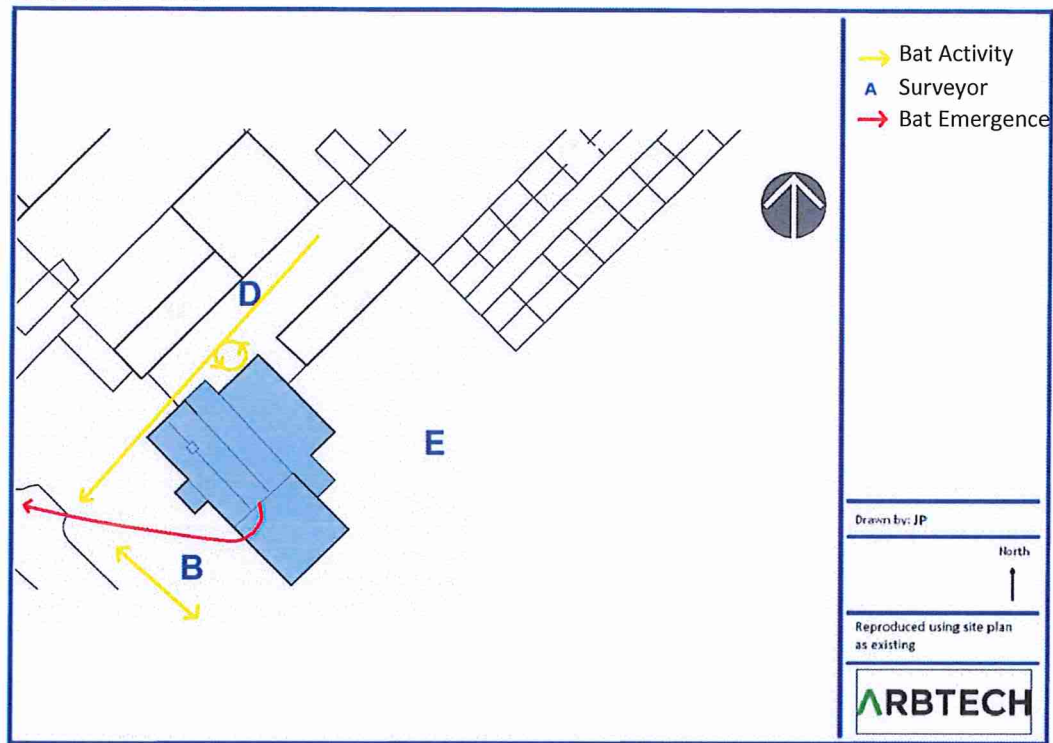
21/09/2015 - B9



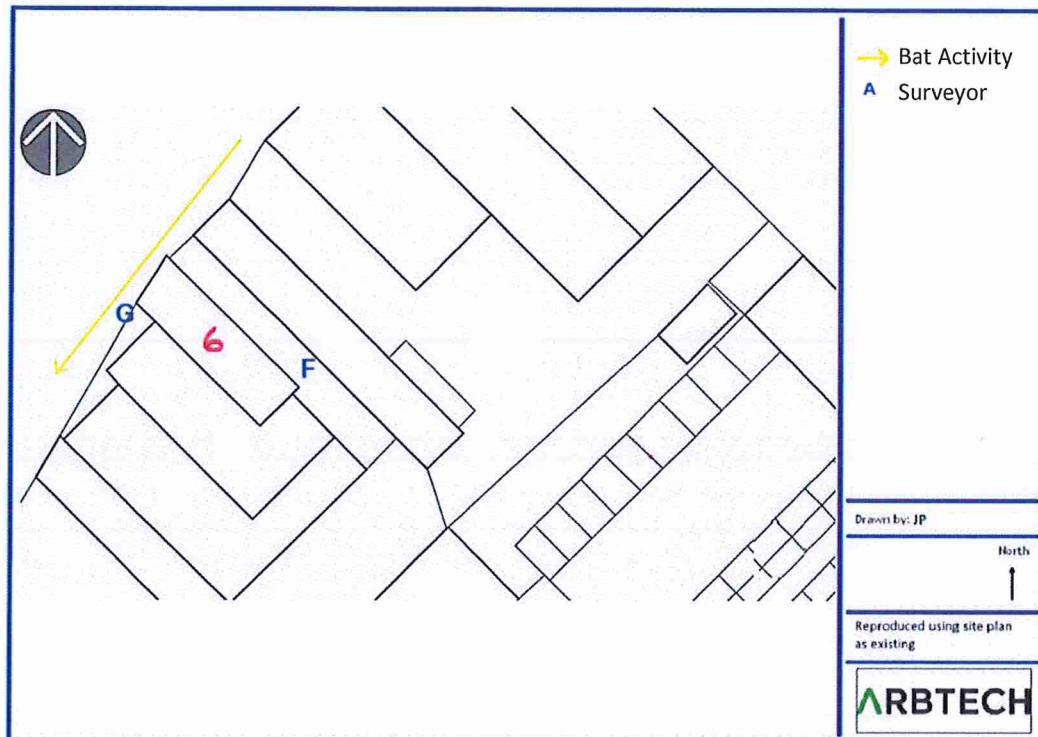
22/09/2015 - B5



23/09/2015 - House



23/09/2015 - B6



24/09/2015 - T1



Appendix 2 Photos



Figure 1: Emergence point