
Chapel Lane, Widnes

Bat Survey Report & Outline Mitigation Strategy

Compiled by Ecology Services Ltd.

on behalf of

Taylor Wimpey

December 2022 (rev. April 2023)



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1.0 Introduction

- 1.1 Ecology Services Limited was commissioned by Taylor Wimpey in February 2022 to undertake an updated survey of buildings and trees for bats at land at Chapel Lane, Widnes, hereinafter referred to as 'the site'. The centre of the site is located by National Grid Reference (NGR) 350000, 387800. The location and boundary of the site is shown on Figure 1.
- 1.2 Recommendations made following the Preliminary Roost Assessment included the requirement for further survey work in relation to bats to be carried out, and presence/absence surveys. The results of these are provided within this report.

Site Description

- 1.3 The site is a working farm located on the outskirts of the town of Widnes, within the Borough of Halton but on the boundary with Knowsley Council, and contains a mix of habitats including: improved and poor semi-improved grassland, species-rich and species-poor hedgerows, wet and dry ditches, three ponds, scattered trees and buildings. The land to the north and west of the site is largely under arable cultivation crossed by hedgerows and ditches with further ponds and an area of broadleaved woodland. To the south lie further small areas of semi-natural broadleaved woodland and further residential development.

Proposals

- 1.4 This Bat Survey Report & Outline Mitigation Strategy has been prepared by Ecology Services Limited on behalf of Taylor Wimpey UK Ltd to assist the local planning authority's consideration of an outline planning application for a site at Chapel Lane, Widnes for:

"Outline planning application (with all matters other than access reserved) (to be determined by Halton Borough Council only) for the development of up to 350 dwellings, public open space, landscaping and associated infrastructure works. Full details for site access arrangements via a new junction on Chapel Lane (to be determined by Knowsley Borough Council only) and emergency access via Sandy Lane (to be determined by Halton Borough Council)."

- 1.5 The proposed development site is located to the north-west of the Widnes urban area. The site is situated within the boundary of two separate allocations for residential development within the adopted Halton Delivery and Allocations Local Plan [DALP] (March 2022) under Policy RD1 (Residential Development Allocations). The allocations comprise two separate land parcels separated by Sandy Lane, (Site Ref. W4 to the west of Sandy Lane and Site Ref. W5 to the east). The application red line boundary does not extend to the full extent of the allocation.
- 1.6 At the time of compiling this report, no detailed development scheme has been prepared and only basic biodiversity enhancements are provided. This report shall be updated to ensure that mitigation and enhancement measures are incorporated once the scheme is finalised at the detailed design stage.

Background and Survey Objectives

- 1.7 Ecology Services Limited was previously commissioned in March 2020 to undertake a preliminary roost assessment following which recommendations were made to undertake potential roost feature inspection surveys of trees and presence/absence surveys which were completed in 2020 (Ecology Services Limited, 2021, Appendix 6). The results of the surveys found no evidence of use of the buildings or trees within the site by bats, but the site was

being used by low numbers of common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and noctule (*Nyctalus noctula*) for commuting and foraging. A **confirmed** bat roost used by small numbers of a common bat species was identified in a building to the west of the site boundary.

- 1.8 The aim of the preliminary roost assessment was to:
 - Undertake a visual inspection of the site to establish baseline conditions;
 - Complete an assessment to ascertain if potential or evidence of use existed for bat species; and
 - Determine if there are requirements for further and/or more detailed surveys.
- 1.9 Following the preliminary roost assessment presence/ absence surveys were recommended in the form of dusk emergence/ dawn re-entry surveys to enable robust data to be collected to determine the presence/ likely absence of roosting bats. The presence/ absence surveys included all structures that contain bat roost potential and have the potential to be affected by the proposals.
- 1.10 The purpose of this report is to state the survey methodologies, present the results of the surveys, evaluate the findings, assess the impacts of the proposals and make recommendations concerning the protection of bat species that may be present at this site. Where possible the report will aim to provide sufficient information to allow a local authority to assess fully the potential impacts of the proposed development on roosting bats.
- 1.11 The bat activity surveys identified roosting bats within one of the buildings, this report has therefore been updated to include an outline mitigation strategy to compensate for the loss of roosting bats which will need to be undertaken under a derogation licence. A suitably worded planning condition will need to be attached to planning permission, if granted.

2.0 Planning Policy and Legislation

- 2.1 This section provides a brief overview of planning policy and legislation relevant to bats in the England. Further information is provided in Appendix 1.

Planning Policy

- 2.2 The National Planning Policy Framework (NPPF, 2021) places a clear responsibility on Local Planning Authorities (LPAs) to contribute to conserving and enhancing the natural and local environment. LPAs should promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species (e.g. Species of Principal importance, Local Biodiversity Action Plan species); and identify and pursue opportunities for securing measurable net gains for biodiversity. In accordance with the NPPF, local planning policy and guidance, development proposals should provide integrated improvement for biodiversity at the site and seek to maintain and enhance opportunities for bats. The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation.
- 2.3 Protected species within England, such as bats, are a 'material consideration' in the determination of a planning application. Therefore, an LPA is unlikely to determine an application until all relevant information relating to protected species or habitats is submitted to fully inform the application. Relevant information includes adequate surveys and, where

required, mitigation strategies, which will need to be submitted to inform a planning application.

- 2.4 The local planning authority (LPA) has a duty to ensure that protected and priority species (e.g. Species of Principal Importance, Biodiversity Action Plan species) are fully considered in a planning decision. Therefore, up to date survey information and, where required, mitigation strategies adequate to assess the impacts of the proposals and to demonstrate that opportunities for species using the site can be maintained, must be provided in support of a planning application.

Legislation

- 2.5 All bats and their roosts receive strict protection under the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats & Species Regulations 2017 (as amended)¹. In brief, this legislation makes it an offence to: kill, injure or capture a bat; to destroy, damage or obstruct access to a bat roost; or to disturb a bat occupying a roost. A Local Authority is a 'competent authority' within the context of Regulation 7 of the Conservation of Habitats & Species Regulations 2017 (as amended) when dealing with planning applications where a European Protected Species (EPS) (all bat species) may be affected. Therefore, planning decisions should only be made when European Protected Species and their habitats are fully taken into account.,
- 2.6 Where proposed works are likely to contravene the legislation protecting bats, a Natural England licence must be applied for, and approved, before works can proceed.
- 2.7 Section 40 of the Natural Environmental and Rural Communities (NERC) Act 2006 (as amended) places a statutory duty on public authorities, in exercising their functions, to conserve and enhance biodiversity in England. Species of Principal Importance for the conservation or enhancement of biodiversity in England, identified by the Secretary of State in consultation with Natural England, are listed under Section 41 of the NERC Act. The Local Planning Authority and government bodies (e.g. Natural England) will expect the overall design of the development to have regard for the conservation and enhancement of populations of these species. Seven bat species are listed as 'Species of Principal Importance' under Section 41 of the NERC Act 2006 (as amended):
- Noctule (*Nyctalus noctula*)
 - Soprano pipistrelle (*Pipistrellus pygmaeus*)
 - Lesser horseshoe (*Rhinolophus hipposideros*)
 - Greater horseshoe (*Rhinolophus ferrumequinum*)
 - Barbastelle (*Barbastella barbastellus*)
 - Bechstein's (*Myotis bechsteinii*)
 - Brown long-eared (*Plecotus auritus*)

¹ The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 continue the same provision for European protected species, licensing requirements and protected areas after Brexit.

3.0 Methodology

Desktop Study

- 3.1 Ecological data and records searches were undertaken by contacting the sources listed in Table 1.

Table 1: Ecological Desktop Study Sources

Source of information	Information supplied
Local Biodiversity Action Plan (LBAP) – Halton	Identification of LBAP species known to occur in the region.
Natural Environment and Rural Communities (NERC) Act 2006 (as amended)	Review of Species of Principal Importance known to occur in the region.
Multi Agency Geographical Information for the Countryside (MAGIC) website	Statutory protected sites designated for their bat interest within 5km of the site. Records of bat roosts relating to Natural England EPS licences within 2km of the site.
Merseyside Biobank RECORD (Local Biological Records Centre for Cheshire, Halton, Warrington and Wirral)	Non-statutory protected sites designated for their bat interest and any records of bats within 2km of the site.

- 3.2 The data searches with RECORD and Merseyside Biobank were undertaken on 27th and 15th June 2022 respectively.

Preliminary Roost Assessment Survey

- 3.3 The preliminary roost assessment for buildings/structures and trees followed the below methodology, which is based on the methods set out in the Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' (2016). Each building/structure and tree was categorised according to its level of suitability and any evidence of roosting bats found during the inspection (see Appendix 2).
- 3.4 An interior and exterior inspection of the buildings/structures and a ground level inspection of trees was undertaken to search for any potential roosting features and evidence of roosting bats. Signs surveyed for included droppings, dead bats, feeding remains (beetle, moth and butterfly remains), urine staining and grease marks around crevices and down walls, and any noises such as scratching and audible bat calls. An Explorer Premium 8803AL (9mm) endoscope was used to check accessible features. Clulite Long Ranger LED Pistol Lights (1200 lumens) and close focusing binoculars were used to better assess any features of interest not accessible. High resolution photographs were taken for later review.
- 3.5 During the survey the surrounding area was assessed in relation to suitable habitat that may be of value to bats.

Buildings/Structures

- 3.6 Preliminary roost assessments of buildings and structures can be undertaken at any of the year and can provide conclusive results, which can save expense and time for a planning applicant. The optimum time to investigate the presence of bats is usually during their active season when signs of presence can be more easily located, although this is dependent on the type of roost being inspected.

Trees

- 3.7 The optimum time to investigate trees for bat roosting potential is between November to April, when trees are not in leaf and potential roosting features such as crevices can be more easily

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seen. Evidence of a bat roost is best determined when bats are active although preliminary roost assessments may be conducted outside of this period and, as with the surveys of buildings/structures, inspections can provide conclusive results where all roosting features are accessible and can be exhaustively searched.

Personnel

- 3.8 The PRA inspection survey was undertaken by Senior Consultant Ecologist Mrs. S. O'Neill BA (Hons), who holds a Bat Class Licence Level 2 (Registration number 2015-13768-CLS-CLS) and Mrs. Z. Foster who holds a Bat Class Licence Level 2 (Registration number 2015-17219-CLS-CLS).

Timing

- 3.9 The PRA inspection survey was conducted on the 6th of May 2022.
- 3.10 The daytime survey was conducted at a time when bats will be active. Feeding will occur on most nights and roost sites, in particular suitable maternity roosts for females, are being sought. Evidence of bat occupation is likely to be detected, should they be present at the site.

Weather Conditions

- 3.11 Weather conditions during the survey were reasonable being warm with no appreciable rain or wind affecting survey.

Presence/ Absence Surveys

- 3.12 Presence/ absence surveys were carried out in accordance with the Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Good Practice Guidelines', which recommends timings and minimum number of survey visits for presence/ absence surveys to give confidence in a negative result for structures (and trees although unlikely to give confidence in a negative result). See Appendix 3 for full details. These are determined by the level of potential assigned to each individual building, structure or tree. See Appendix 2 for the full table.
- 3.13 The presence/ absence surveys required up to four surveyors on any one survey to enable all previously identified bat roosting features to be covered. Surveyors noted any visual observations of bat activity and were aided by the use of the following equipment; Batbox Duet, a heterodyne and frequency division bat detector and Magenta Bat4/Bat5, a heterodyne bat detector, used in conjunction with an AnaBat SD1/2 detectors and Echo Meter Touch 2 Pro detectors with Samsung SM-P610 Tab S6 Lite Tablets, which were set to record so that data could be analysed if required. Canon XA-40 and XA-10 infrared cameras were also used along with four no.96 infrared LED lights and two no.12 infrared LED lights.
- 3.14 Up to three presence/ absence surveys were undertaken on any building at the site at an optimal time of year over the active breeding season of bats. These were conducted between the 13th of June 2022 and the 17th of August 2022 inclusive.

Personnel

- 3.15 The presence/ absence surveys were conducted by Senior Consultant Mr. S. Booth who holds a Bat Class Licence Level 2 (Registration number 2016-27296-CLS-CLS) and experienced consultant ecologists who have regularly been involved with presence/ absence surveys including experienced consultant ecologists; Mrs. Z. Foster who holds a Bat Class Licence Level 2 (Registration number 2015-17219-CLS-CLS), Mr C. Smith (MSc BA), Mr M. Barnes and Miss P. Hickey (MSc BSc Hons).

Timing

- 3.16 The presence/ absence surveys were undertaken between the 13th of June 2022 and the 17th of August 2022 during the peak activity season of bats and when maternity colonies are in occupation.

Weather Conditions

- 3.17 Weather conditions during the surveys were mainly dry and fine. On and off rain was evident to the end of one survey, although bat activity and roosting were recorded and one survey had to be rescheduled due to the weather deteriorating to heavy rain and gusting winds.

Roost Status

- 3.18 If evidence of a bat roost is recorded during the surveys, the status of the roost is evaluated based on its function. This requires sufficient survey effort to determine the species and numbers of roosting bats present, the time of year that the roost is used and characteristics of the roost itself. The Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' details types of bat roosts which may be defined in several ways, as below:

- Day roost – where individual bats or small groups of males, rest or shelter in the day.
- Night roost – where bats rest or shelter in the night but are rarely found during the day.
- Feeding roost – where individual or few bat/s rest or feed during the night.
- Transitional/occasional roost – used for short periods of time by few or occasionally small groups of bats on waking or prior to the hibernation period.
- Swarming site – large numbers of males and females gather during late summer to autumn.
- Mating sites – where mating takes place from late summer and through winter.
- Maternity roost – where females give birth and raise their young.
- Hibernation roost - where bats may be found during winter. To have a constant cool temperature with high humidity.
- Satellite roost – an alternative roost used by individual to small numbers of breeding females over the breeding season. Usually close to main nursery colony.

- 3.19 Roost selection is often closely correlated with presence of suitable foraging habitat within a reasonable commuting distance from the roost. Different roost sites are used throughout the active season which is most dependent upon roost microclimate and abundance of invertebrate prey nearby. Weather conditions can also affect the ability of bats to successfully forage. All British bats are insectivorous.

Limitations

- 3.20 Trees 2, 4, 5, 7 and 8 were located on the boundary of the site. Full view of elevations outside of the site boundary were unable to be undertaken due to access restrictions.
- 3.21 The survey undertaken on the 28th June 2022, had rain on and off throughout the survey period. Bats were recorded during the survey and roosting was noted therefore the survey is considered to be valid.
- 3.22 The survey on Building 1 undertaken on the 25th July 2022 was abandoned early due to rain becoming more persistent and wind becoming stronger. This survey was repeated on the 17th August 2022.

- 3.23 Overall, there are limitations to the survey undertaken and these have been taken into consideration when conclusions, impacts and recommendations have been made.

4.0 Results and Evaluation

Desktop Study

National Status

- 4.1 There are 18 species of bat that are native to the United Kingdom. The latest Review of the Conservation Status of British Mammals (2018) has shown that where change could be assessed with reasonable confidence there have been increases in the geographical range and population status of two species of UK bat (greater and lesser horseshoe bat) and decrease in the geographical range of one species (grey long-eared bat).
- 4.2 Increases in population were also identified in the following species: Bechstein's, Daubenton's, Natterers, serotine and brown long-eared although it is noted that the reliability of the results is poor.
- 4.3 Population data was not available for; Alcatraz, whiskered, Brandt's, Leisler's, noctule, Barbastelle and Nathusius pipistrelle.
- 4.4 Population estimates were given for common and soprano pipistrelle however could not be reliably compared to the results from Harris et al. (1995) as the two species had not been identified as separate species at the time of the survey. Pipistrellus spp. remain the commonest species of bat in the UK despite their decline.
- 4.5 Serotine and barbastelle are considered vulnerable and Leisler's and Nathusius' pipistrelle, near threatened in Britain and England in the Red List for Britain's Terrestrial Mammals (Mathews and Harrower, 2020).

Regional Status

- 4.6 The north west of England appears to be a stronghold for Whiskered and Brandt's, both of which are reasonably rare in southern England.
- 4.7 The Cheshire Local Biodiversity Action Plan (LBAP) lists ten bat species recognised as being resident in Cheshire (refer to Appendix 4) as local priority species. No bat species are listed in the Halton LBAP.
- 4.8 The North Merseyside Local Biodiversity Action Plan (LBAP) lists eight bat species recognised as being resident in North Merseyside (refer to Appendix 4) as local priority species.

Designated Sites

- 4.9 There are no statutory or non-statutory protected sites designated on the basis of their interest for bats that are located within the vicinity of the site and which could be adversely affected by the proposed development of the site.

Records Data Search

- 4.10 The data search undertaken in 2022, found 26 records of common pipistrelle, 4 records of pipistrelle sp. and one record of an un-identified species of bat within 2km of the site, dating from between 1988 to 2019.

- 4.11 Records of European Protected Species mitigation licences for bats in the area surrounding the site include; a licence relating to common pipistrelle at a location approximately 3.3km to the south of the site and a further licence for the same species located c.3km to the north of the site. A licence pertaining to common pipistrelle, soprano pipistrelle, brown long-eared and natterer's located c. 3.45km to the north west of the site.

Preliminary Roost Assessment

Habitat Assessment

- 4.12 The site is located on the outskirts of the town of Widnes, within the Borough of Halton but on the boundary with Knowsley Council, and contains a mix of habitats including: improved and poor semi-improved grassland, species-rich and species-poor hedgerows, wet and dry ditches, three ponds, scattered trees and buildings. The land to the north and west of the site is largely under arable cultivation crossed by hedgerows and ditches with further ponds and an area of broadleaved woodland. To the south lie further small areas of semi-natural broadleaved woodland and further residential development.
- 4.13 The site is connected by hedgerows and ditches to foraging areas in the wider landscape comprising woodland to the north and east of the site. Areas of particular note include Alder Brook, George's Wood and Pex Hill Country Park which are all Local Wildlife Sites (LWS) within 1km of the site. These areas are likely to provide good quality foraging habitat and other roosting opportunities for bats. Buildings within Eccleston plus farm buildings and houses to the south-west of the site are also likely to provide roosting opportunities bats.
- 4.14 Overall, habitats within the immediate and wider surrounds of the surveyed buildings are considered of low value for foraging and commuting bats. Where suitable habitats are present in close proximity to buildings/structures/trees then there is generally an increased use of these for roost sites due to a higher abundance of food and better access to food sources.

Buildings/ Structures

- 4.15 A description of the buildings/ structures can be found in the Table 2 below and overleaf. Photos of buildings/structures with annotations showing locations of potential roosting features are provided in Appendix 5. Buildings 1, 2, 9 and 10 (group) lie outside the development site.

Table 2: Description of Buildings/ Structures.

Building 1
<i>Description:</i>
A single storey, residential bungalow with a small, rear external porch extension on the eastern elevation. The bungalow is brick built with concrete roof and ridge tiles with wooden fascias/ soffit boxes and uPVC guttering. It has a pitched roof with two, brick-built chimney stacks. The extension is brick built with a flat, felted roof. The window frames are uPVC.
<i>Bat roost potential signs:</i>
There are small gaps under the flashing where the chimney meets the roof on the western elevation. There are numerous places where the soffit box is damaged or open on the western elevation and northern gable. However, the soffit boxes are not thermally efficient and unlikely to provide suitable conditions for roosting bats. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building was considered to have low potential for roosting bats.

The updated PRA survey noted that some previously identified gaps at the barge boards had been filled using expandable foam. Further gaps were recorded at the barge boards, under roof tiles and at lifted lead flashing,

Internal access was gained into the loft area and a full appraisal was achieved. The window on the eastern elevation was viewed from within the loft area and found to be covered internally which restricted light access within this area. The internal roof is composed of an open timber frame and roofing membrane was present. The eastern loft area was relatively empty and the western area had items in storage. Numerous mouse droppings were observed throughout the loft area. Internal lighting is present.

No droppings or any other evidence of the presence of roosting bats was identified which suggested present or historic use.

Overall, the updated survey found the building to have a **moderate** potential for roosting bats.

Building 2

Description:

A single storey, residential bungalow with an extension on the southern elevation. The bungalow is brick built with concrete roof and ridge tiles with uPVC fascias/ soffit boxes and guttering. It has a pitched roof with a brick-built chimney.

The extension is brick built with a flat, felted roof. The window frames are plastic.

Bat roost potential signs:

There are small, negligible gaps where mortar is missing under roof tiles and the ridge tiles and under the flashing where the chimney meets the roof on the western elevation.

There is a gap in the brickwork caused by a crack in the chimney on the western elevation. This gap was open to the elements and likely would be wet inside.

No droppings or any other evidence of the presence of bats was identified which suggested present or historic use.

The building was considered to have **negligible** potential for roosting bats.

Internal access into the loft area was gained and a full appraisal was achieved. The window located on the upper western elevation was not internally covered by any blind or other covering and light in the northern section of the loft area was evident. A brick-built chimney was present within loft area and evidence of a leak was observed around this upper area. Internally the ceiling of the loft area is boarded and it is not known if roofing membrane is present. The loft area is used for storage and a number of mouse droppings were observed within this area. Internal lighting is present.

The updated survey confirms that the building remains at a **negligible** potential to support roosting bats.

Building 3

Description:

A single storey, timber shop with a pitched, corrugated asbestos roof with wooden windows and doors. There are no fascias or soffits present. The building is covered with a mix of wooden weather boarding and plywood sheeting.

Bat roost potential signs:

A small gap is present at the apex of the gable on the southern elevation.

No droppings or any other evidence of the presence of bats was identified which suggested present or historic use.

The building was considered to have **low** potential for roosting bats.

Externally the building remains in the same condition as previously noted.

Internal access into Building 3 was gained which found the building to be vaulted with an open timber frame that was boarded internally. A small section of boarding was missing to the east of the roof which revealed further boarding and roof timbers. The building is used frequently as a shop for food items and internal lighting is present. The updated survey found the building to remain at a low potential to support roosting bats.
Building 4
Description:
A single storey, shed type building with a pitched, felted roof. The building has a concrete base and wooden boarding. There are metal doors on the southern elevation, a window on the eastern elevation and on the northern elevation, a portion of the wall has been re-built with bricks that have been sealed with expanding foam.
Bat roost potential signs:
There are gaps between the wooden boards leading into the interior of the building. There are gaps halfway down the building where the wooden boarding joins the concrete base. On the western elevation there is a hole where a grille for an extractor fan has fallen out which leads inside. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have low potential for roosting bats.
Externally the building remains in the same condition as previously noted. The updated survey gained internal access into the building and a full internal appraisal was undertaken. The building is vaulted to the roof and wooden boards clad the timber structure internally. The building is used for storage with a small workshop area to the north east. Evidence of mouse droppings were found within the building. The updated survey found the building to remain at a low potential to support roosting bats.
Building 5
Description:
A large, single storey, metal framed barn with a pitched, asbestos covered, corrugated roof. The barn is entirely open to the south side and currently contains circular hay bales and farm vehicles. The north elevations and both gable ends are clad in wood panelling. Overall, the building is open and has no thermal properties, limiting its suitability for bats.
Bat roost potential signs:
No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have negligible potential for roosting bats.
The updated survey found the building to remain in the same condition as previously noted and potential for roosting bats remains negligible.
Building 6
Description:
A single storey garage with a lean-to attached the eastern elevation used for storage. The garage has a timber frame with asbestos sheets for roofing and wooden fascias. There are no windows but wooden doors are present on the northern elevation. There are scrub and trees directly adjacent to the western and southern elevations, limiting access by bats. The lean-to is wooden framed and open to the northern elevation with wooden fascias. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. Internally the roof is timber framed and the walls are timber with plaster boarding.

Bat roost potential signs: There is a gap at the apex of the northern gable that leads into the building. There are also gaps along the ridge and at the top of the fascias where they meet the roof and also underneath the fascias that lead inside. Internally, the building has little to no roost potential due to the lack of roosting sites and the thermal properties of the building are such that will cause the temperature within the buildings to fluctuate. The building is considered to have negligible potential for roosting bats. The updated survey found the building to remain in the same condition as previously noted and potential for roosting bats remains negligible.
Building 7
Description: A single storey, concrete block garage with a pitched roof comprising corrugated asbestos sheeting. There are wooden fascias and uPVC guttering. There is a wooden door and a small window on the western elevation and a window on the northern elevation. Part of the western elevation is obscured by the lean-to attached to Building 6 and part of the eastern elevation is obscured by scrub. No internal access was gained to the building due to health and safety re: COVID-19.
Bat roost potential signs: The wooden barge boards on the northern and southern elevations are in poor repair and there are numerous gaps including at the apex. The southern elevation, however, is cluttered and obscured with scrub, limiting access by bats. There are areas of lifted flashing on the roof; it was not possible to determine if these provided entry into the building. The western and eastern elevations had small gaps present under the guttering, however these were heavily cobwebbed indicating no access by bats had been gained. There were no grease stains or other rubbing marks which would have been caused by bats accessing these areas. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have low potential for roosting bats. The updated survey found the building to remain in the same condition as previously noted and potential for roosting bats remains low.
Building 8
Description: A large, single storey, timber former chicken cabin, now used to house goats and sheep. The roof is pitched and covered by asbestos corrugated sheets. Internally the building is open plan with sections to segregate animals. The roof structure is timber with supporting trusses and there is no loft space. A full internal inspection was not undertaken due to animals being present in the building and as such, the internal portions were viewed from outside.
Bat roost potential signs: There are lots of entry points into the building on the northern and southern elevations through open windows, doors and vents. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have low potential for roosting bats. The updated survey found the building to remain in the same condition as previously noted and potential for roosting bats remains low.

Building 9
Description:
A timber and metal framed agricultural building, currently used for housing cattle. It has a pitched roof with corrugated sheeting and plastic skylights. The southern part of the building has a single pitched roof. The building has a concrete block base with a mixture of corrugated metal sheeting and wooden boards on the upper part. Internally the building is a mixture of timber frame and metal girders. There are metal barge boards on the eastern and western elevations and guttering on the northern and southern elevations. The building is open to the northern and eastern elevations. The wooden boards on the southern and western elevations have large gaps that are open to the inside of the building. There is a store room within the building that is timber framed and has an open doorway to the eastern elevation.
Bat roost potential signs:
The building is open and draughty and there are very few suitable roosting places. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have negligible potential for roosting bats. The updated survey found the building to remain in the same condition as previously noted and potential for roosting bats remains negligible.
Building 10
Description:
A group of timber sheds in a poor, dilapidated state of repair. The sheds are very cluttered with trees, overgrown scrub and tall vegetation surrounding them, offering no suitable flight lines and limiting access by bats. The buildings that were still standing, were in an unsafe state to enter.
Bat roost potential signs:
There are no suitable features present for roosting bats. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The buildings are considered to have negligible potential for roosting bats. The updated survey found the building to remain in the same condition as previously noted and potential for roosting bats remains negligible.
Building 11
Description:
A large, metal framed building housing multiple grain silos. The building is clad in a mix of corrugated steel sheeting and asbestos panels. The roof is pitched and covered with asbestos sheets. On the top of the roof is a small Cupola type structure clad with corrugated metal sheets with a metal sheet covered, pitched roof. Internally the building is open plan containing steel frames and silos with multiple steel ledges and beams. There are wooden gantry walkways accessible via a ladder but these were not considered safe to access.
Bat roost potential signs:
The building is large and draughty and there appeared to be very few suitable roosting places where the surveyor could gain access. The high gantry walkways, however, were not considered safe to use and it was not possible, therefore, to fully inspect the building. The building is not considered to have good thermal properties.

No droppings or any other evidence of the presence of bats was identified which suggested present or historic use.
The building is considered to have low potential for roosting bats.
The updated survey found the building to remain in the same condition as previously noted and potential for roosting bats remains low .
Building 12
Description:
An agricultural building used to store vehicles and equipment. There is a lean-to on the eastern elevation that housed a bull at the time of survey. The building has a concrete block base, corrugated metal sheeting and asbestos sheeting to the upper part and corrugated asbestos sheeting on the roof with plastic skylights. There are wooden fascias on the eastern and western elevations and asbestos barge boards on the southern elevation. The lean-to is a wooden, timber framed structure with wooden pallet roofing. The lean-to is open to the southern elevation and through to Building 11 at the northern elevation. The internal area of the lean-to could not be accessed due to the presence of the bull. The building is not considered to have good thermal properties. Internally the building is timber framed with a raised area in the south eastern corner of the building that is formed by wooden boarding and plasterboard.
Bat roost potential signs:
There are gaps underneath the fascias on the western elevation and the barge boards on the southern elevation. There are also gaps behind the asbestos sheeting on the western and southern elevations where they meet the roofline, which may lead into the building. There were no grease stains or other rubbing marks which would have been caused by bats accessing these areas. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have low potential for roosting bats.
The updated survey found the building to remain in the same condition as previously noted and potential for roosting bats remains low .

- 4.16 Taking into account the initial PRA survey and the updated PRA survey, low bat roosting potential was contained within Buildings 3, 4, 7, 8, 11 and 12. Building 1 was found to have an increased potential to support roosting bats from low to moderate. Taking into consideration all previous surveys undertaken at the site Building 1 has been found to support a bat roost and is therefore classified as a confirmed bat roost. Building 1 lies outside the proposed development site.
- 4.17 Buildings 2, 5, 6, 9 and 10 were found to contain negligible potential to support roosting bats and no further activity surveys are deemed to be required for these buildings. Buildings 2, 9 and 10 lie outside the proposed development site.

Trees

- 4.18 A description of the trees subject to PRA can be found in Table 3 below and overleaf. Results of the PRF survey are also included within this table. Photos of the trees with annotations showing locations of potential roosting features are provided in Appendix 5. Trees which were found to have negligible potential to support roosting bats are not included within the table below.

Table 3: Description of Trees.

Tree 1
Description:
A mature oak (<i>Quercus</i> sp.) tree approximately 15m tall on the edge of a field boundary adjacent to Sandy Lane.
Bat roost potential signs:
There is a large knot hole at 4m on the eastern elevation of the tree. The tree was considered to have moderate potential for roosting bats.
PRF Survey Results:
Tree 1 was subject to an examination and the feature identified within the PRA was found to recede to a depth where it could not confidently be fully searched or reclassified. The tree's potential to support roosting bats therefore remains as moderate .
The updated PRA survey found the tree to remain in the same condition as previously noted and potential for roosting bats remains moderate .
Tree 2
Description:
A mature sycamore (<i>Acer pseudoplatanus</i>) tree approximately 15m tall. The tree is located on adjacent land along the site boundary.
Bat roost potential signs:
An upward facing knot hole is present at 2m on the knuckle of a branch on the northern elevation of the tree. The knot hole could be water filled, but it could equally recede into the trunk of the tree, but access was not possible to confirm. The tree was considered to have moderate potential for roosting bats.
The updated survey found the tree to remain in the same condition as previously noted and potential for roosting bats remains moderate .
Tree 3
Description:
An ash (<i>Fraxinus excelsior</i>) tree approximately 18m tall, located to the north of the farm buildings.
Bat roost potential signs:
There is an old tear-out wound at 6m, which is 10cm in diameter. The cavity is upward facing but it could recede into the trunk of the tree. The tree was considered to have moderate potential for roosting bats.
PRF Survey Results:
Tree 3 was subject to a thorough examination and the feature identified within the PRA were found not to recede to a depth that would be suitable to support roosting bats. The tree potential to support roosting bats has therefore been reclassified as low .
The updated PRA survey found the tree to remain in the same condition as previously noted and potential for roosting bats remains low .
Tree Group 4
Description:
A line of dead trees on the northern boundary of the site on adjacent land.
Bat roost potential signs:
A many of the trees have delaminating bark with negligible or low bat roosting potential, but the delamination on one tree in particular was considered to offer a moderate level of roosting suitability. The tree was considered to have moderate potential for roosting bats.

The updated survey found the Tree Group 4 to remain in the same condition as previously noted and potential for roosting bats remains moderate .
Tree 5
Description:
A mature, multi-stemmed sycamore tree approximately 10m tall. Two of the stems had split creating cavities approximately 2-3m high on the northern elevation of the tree.
Bat roost potential signs:
Cavities were present on two of the stems. It could not be established how far up the cavities receded into the trunks. The tree was considered to have moderate potential for roosting bats.
PRF Survey Results:
Tree 5 was subject to a thorough examination. The features identified within the PRA were both narrow and found to recede to a depth of approximately 450mm with a 3-4cm diameter. Internally the timber was rotting, particularly at the top and wet. There were clusters of leopard slugs (<i>Limax maximus</i>) at the tops of both of the cavities. Given that the features allow for water to ingress, the tree potential to support roosting bats has therefore been reclassified as low .
The updated survey found the tree to remain in the same condition as previously noted and potential for roosting bats remains low .
Tree 6
Description:
A mature, weeping willow approximately 15m high. The lower part of the tree is densely covered with ivy (<i>Hedera helix</i>). There is a damaged limb approximately 5-6m high on the southern elevation.
Bat roost potential signs:
A rot hole is present on a broken limb approximately 5-6m high on the southern elevation. It could not be determined if the hole receded into the limb. The tree was considered to have moderate potential for roosting bats.
The updated survey found the tree to remain in the same condition as previously noted and potential for roosting bats remains moderate .
The updated survey found two further trees that contain potential roosting features for bat species.
Tree 7
Description:
A mature willow species approximately 10m high. The tree has a number of main trunks and branches form a cluttered environment. There is a limb tear at c.3m on the eastern elevation and a split branch from where a limb has torn off at c.6m also on the eastern elevation. The tree is located to the east of Sandy Lane.
Bat roost potential signs:
The crack where a limb has torn off at c.3m appears to recede and may provide a potential roosting feature. The split branch at c.6m also appears to recede and may provide a potential roosting feature. The tree was considered to have moderate potential for roosting bats.
Tree 8
Description:
A mature, oak species that is c.12m in height. The tree is located to the east of Sandy Lane within the eastern boundary of the site. A hole was observed where a limb has been removed/broken from the tree.

Bat roost potential signs:

A hole was observed at c.4m in height on the western elevation where a limbed has been removed or has been broken off the tree.

The tree was considered to have **low** potential for roosting bats.

- 4.19 Following the initial preliminary roost assessment in 2020 Trees 1 - 6 were found to contain **moderate** bat roost potential. Following the potential roosting feature inspection survey in 2020, Trees 3 and 5 were reclassified as **low** whereas Tree 1 retained **moderate** potential for roosting bats.
- 4.20 It was not safe to undertake a potential roosting feature survey of Tree Group 4 in 2020 and there was no land access to Trees 2 and 6 and as such, they retain **moderate** potential to support roosting bats. The updated PRA found the trees to be in the same condition as when the previous surveys were undertaken.
- 4.21 In addition to Trees 1 to 6 a further two trees were noted as holding bat potential roosting potential. Tree 7 was found to hold **moderate** potential and Tree 8 was found to hold **low** potential. Both of these trees are located within the boundary of the site.
- 4.22 All other trees surveyed had no suitable potential roosting features and therefore **negligible** potential to support roosting bats.

Presence/ Absence Survey Results

- 4.23 An overview of dates, times and the results of the surveys are provided below. Building 1 lies outside the proposed development site.

Table 4: Overview of Presence/ Absence Surveys

Date of surveys & survey type	Start & end times and time of Sunset/sunrise	Structure reference/ location	Equipment used	Weather Conditions
Dusk 13.06.22	Start time: 21.09 End time: 23.09 Sunset time: 21.39	Building 1 Building 3 & Building 4	Batbox Duets used in conjunction with AnaBat SD1/2 detectors. Canon XA-40 and Canon XA-10 infrared cameras with infrared lights.	Start Temp: 14.2°C Sunset Temp: 12°C Finish Temp: 5.3C Precipitation: Dry Wind: Calm to Light breeze (BS0 to BS1*) Cloud Cover: 80%
Comments (to include no. of surveyors used for each visit): Four surveyors were required to cover all suitable potential roosting features identified on these buildings. Two infrared cameras were also used to support the surveyors.				
Dusk 22.06.22	Start time: 21.28 End time: 23.13 Sunset time: 21.43	Tree 6	Batbox Duet used in conjunction with AnaBat SD2 detector and a Canon XA-40 infrared camera with infrared lights.	Start Temp: 17.9°C Sunset Temp: 17.7C Finish Temp: 14.2°C Precipitation: Dry Wind: Calm (BS0*) Cloud Cover: 0%
Comments (to include no. of surveyors used for each visit): One surveyor was required to cover the suitable potential roosting features identified. One infrared camera was also used to support the surveyor.				
Dusk 27.06.22	Start time: 21.28 End time: 23.13	Building 1	Batbox Duet and Magenta Bat 4 used in conjunction with AnaBat	Start Temp: 16.5°C Sunset Temp: 15.6°C Finish Temp: 13.9°C

Date of surveys & survey type	Start & end times and time of Sunset/sunrise	Structure reference/ location	Equipment used	Weather Conditions
	Sunset time: 21.43		SD2 detectors and a Canon XA-40 infrared camera.	Precipitation: Breezy/ Overcast Wind: Light breeze (BS1*) Cloud Cover: 100%
Comments (to include no. of surveyors used for each visit): Two surveyors were required to cover all suitable potential roosting features identified. Two infrared cameras were also used to support the surveyors.				
Dusk 28.06.22	Start time: 21.28 End time: 23.13 Sunset time: 21.43	Building 11 Building 12	Batbox Duets and Magenta Bat4 used in conjunction with AnaBat SD2 detectors and an Echometer Touch 2 Pro with a recording device. Canon XA-40 and Canon XA-10 infrared cameras and infrared lights were also used.	Start Temp: 15.4°C Sunset Temp: 14.8°C Finish Temp: 12.7°C Precipitation: Drizzle and rain showers on and off during survey Wind: Light breeze to Gentle breeze (BS2-3*) Cloud Cover: 100%
Comments (to include no. of surveyors used for each visit): Three surveyors were required to cover all suitable potential roosting features identified. Two infrared cameras were also used to support the surveyors.				
Dusk 20.07.22	Start time: 21.26 End time: 22.56 Sunset time: 21.26	Building 7 Building 8	Batbox Duet and Magenta Bat4 used in conjunction with AnaBat SD1/2 detectors and an Echometer Touch 2 Pro with a recording device. Canon XA-40 and Canon XA-10 infrared cameras and infrared lights were also used.	Start Temp: 17.7°C Sunset Temp: 17.1°C Finish Temp: 15.9°C Precipitation: Drizzle at end of survey Wind: Light Breeze (BS2*) Cloud Cover: 100%
Comments (to include no. of surveyors used for each visit): Three surveyors were required to cover all suitable potential roosting features identified. Two infrared cameras were also used to support the surveyors.				
Dusk 25.07.22	Start time: 21.04 End time: 22.16 Sunset time: 21.19	Building 1	Batbox Duet and used in conjunction with AnaBat SD2 detector and an Echometer Touch 2 Pro with a recording device. Canon XA-10 infrared camera and infrared lights were also used.	Start Temp: 15°C Sunset Temp: 14.3°C Finish Temp: 13.3°C Precipitation: Drizzle (deteriorating over survey) Wind: Light breeze (BS2*) at start then gusts to end. Cloud Cover: 100%
Comments (to include no. of surveyors used for each visit): Two surveyors were required to cover all suitable potential roosting features identified. Two infrared cameras were also used to support the surveyors. The survey was abandoned due to increasing heavy drizzle and wind gusts.				
Dusk 08.08.22	Start time: 20.39 End time: 22.24 Sunset time: 20.54	Building 11 Building 12	Batbox Duet and Magenta Bat4 used in conjunction with AnaBat SD1/2 detectors and Echometer Touch 2 Pros with recording devices. Canon XA-40 and Canon XA-10 infrared cameras and infrared lights were also used.	Start Temp: 20.9°C Sunset Temp: 17.8°C Finish Temp: 12.7°C Precipitation: Dry Wind: Calm (BS0*) Cloud Cover: 0%

Date of surveys & survey type	Start & end times and time of Sunset/sunrise	Structure reference/ location	Equipment used	Weather Conditions
Comments (to include no. of surveyors used for each visit): Three surveyors were required to cover all suitable potential roosting features identified. Two infrared cameras were also used to support the surveyors.				
Dusk 17.08.22	Start time: 20.20 End time: 22.05 Sunset time: 20.35	Building 1 Tree 6	Batbox Duet and Magenta Bat4 used in conjunction with AnaBat SD1 detector and Echometer Touch 2 Pro's with recording devices. Canon XA-40 and Canon XA-10 infrared cameras and infrared lights were also used.	Start Temp: 20.6°C Sunset Temp: 17.8°C Finish Temp: 15.5°C Precipitation: Dry Wind: Light Air to Calm (BS1-BS2*) Cloud Cover: 100%
Comments (to include no. of surveyors used for each visit): Three surveyors were required to cover all suitable potential roosting features identified. Two infrared cameras were also used to support the surveyors.				

* BS - Beaufort Scale

Presence/ Absence Survey No.1

Building 1 (13.06.22)

- 4.24 No evidence of bat emergence was recorded by either of the surveyors.
- 4.25 Commuting and foraging activity was identified at the site surrounding the surveyed building and down the driveway of the property. Bat species identified comprised entirely common pipistrelle.

Buildings 3 & 4 (13.06.22)

- 4.26 No evidence of bat emergence was recorded by either of the surveyors.
- 4.27 Commuting, foraging and feeding activity was identified at the site surrounding the surveyed buildings. Activity was mainly heard but observations of bats and direction of flight paths were minimal. Bat species identified comprised entirely common pipistrelle.

Buildings 7 & 8 (20.07.22)

- 4.28 No evidence of bat emergence was recorded by any of the surveyors.
- 4.29 Commuting, foraging and feeding activity was identified at the site surrounding and between both of the surveyed buildings. Bat species identified comprised entirely common pipistrelle. Brief social calls were recorded by the surveyor located to the east of Building 8.

Buildings 11 & 12 (28.06.22)

- 4.30 Evidence of bat emergence was recorded by the surveyor located at the north eastern corner of Building 11. The bat was observed to emerge from under a barge board on the main structure of the building, #1. Bats were also observed entering and exiting under the attached lean-to building. This was confirmed during the camera footage review.
- 4.31 Commuting, foraging and feeding activity was identified at the site surrounding the surveyed building. Bat species identified comprised entirely common pipistrelle.

Tree 6 (22.06.22)

- 4.32 No evidence of bat emergence was recorded by the surveyor.
- 4.33 Commuting, foraging and feeding activity was identified at the site surrounding the surveyed tree but there was no interaction with the tree by any bats. Bat species identified comprised entirely common pipistrelle.

Presence/ Absence Survey No.2

Building 1 (27.06.22)

- 4.34 No evidence of bat emergence was recorded by any of the surveyors.
- 4.35 Commuting and foraging activity was identified at the site surrounding the surveyed building and the adjacent field to the north west. Bat species identified comprised entirely common pipistrelle.

Buildings 11 & 12 (08.08.22)

- 4.36 Evidence of a possible bat emergence was recorded by the surveyors. The camera footage was further reviewed which appeared to show emergence and re-entry of a bat from the north eastern corner of Building 11. The bat appeared to emerge at the joining timber frame between the main building and the northern most lean-to, #2, although this could not be 100% confirmed.
- 4.37 Commuting, foraging and feeding activity was identified at the site surrounding the surveyed buildings. Bat species identified comprised entirely common pipistrelle.

Tree 6 (17.08.22)

- 4.38 No evidence of bat emergence was recorded by the surveyor.
- 4.39 Commuting and foraging activity was identified at the site surrounding the surveyed tree. Activity was recorded around the tree but no direct interaction with the tree was noted. Bat species identified comprised entirely common pipistrelle.

Presence/ Absence Survey No.3

Building 1 (25.07.22)

- 4.40 No evidence of bat emergence was recorded by any of the surveyors.
- 4.41 A single commuting pass by common pipistrelle was recorded during the survey. The survey was ended early due to high winds and rain.

Building 1 (17.08.22) – Repeated

- 4.42 No evidence of bat emergence was recorded by any of the surveyors.
- 4.43 Commuting and foraging activity was identified at the site surrounding the surveyed building. A large proportion of bats calls were distant or where bats were heard but not seen. Bat species identified comprised entirely common pipistrelle.

Summary and Evaluation

- 4.44 When considering all of the surveys undertaken to date the preliminary roost assessments undertaken at the site have found Building 1 (outside the development site) to contain **moderate** bat roost potential and Buildings 3, 4, 7, 8, 11 and 12 to contain **low** bat roost potential when considering the presence of potential roosting features, as noted within Table 1.

- 4.45 The preliminary roost assessments found Buildings 2, 5, 6, 9 and 10 (group) to contain **negligible** bat roost potential, as noted within Table 1. Buildings 2, 9 and 10 (group) lie outside the proposed development site.
- 4.46 Following the initial preliminary roost assessment in 2020 Trees 1-6 were assigned **moderate** bat roost potential when considering the presence of potential roosting features, as noted within Table 2. Following potential roosting feature inspection surveys conducted in 2020, Trees 3 and 5 were reclassified as **low** potential whereas Tree 1 retained **moderate** potential for roosting bats.
- 4.47 It was not safe to undertake an aerial inspection of Tree Group 4 and there was no land access to Trees 2 and 6 and as such, they retain **moderate** potential to support roosting bats (Ecology Services Limited, 2021, Appendix 6).
- 4.48 The updated preliminary roost assessment undertaken in 2022 confirmed that the trees remained in the same condition as was noted during the previous surveys. Two trees holding bat roosting potential were further noted in 2022. Tree 7 was found to hold **moderate** potential and Tree 8 was found to hold **low** potential. Both of these trees are located within the boundaries of the site and are not to be affected by the proposed development.
- 4.49 In line with the guidance, presence/ absence surveys were conducted on Buildings 1, 3, 4, 7, 8, 11 and 12 and on Tree 6. Although Building 1 lies outside the proposed development site, it is located in close proximity and therefore further surveys were undertaken in 2022 to provide up to date information on the roost present within this building. Buildings 2, 9 and 10 (group) lie outside the proposed development site, were considered to have negligible bat roost potential and were not subject to further surveys. Confirmed presence of roosting bats was recorded within Building 11 (#1). A further possible bat roost was also located within Building 11 (#2) this noted as possible by the surveyor at the time of the survey and was also noted as possible by the reviewer of the camera footage which increases the probability of this being a confirmed roost. Building 11 is considered to support a common pipistrelle day roost. Buildings 11 and 12 are in such close proximity to each other therefore the removal of Building 12 is considered highly likely to cause disturbance to bats located within Building 11.
- 4.50 No bats were observed to be roosting within Building 1 during the 2022 presence/ absence surveys. However, this does not negate any legislative commitments in relation to roosting bats and disturbance to this building (Building 1 was found to support a common pipistrelle day roost in 2020) and Building 1 remains classified as a common pipistrelle day roost that is used infrequently.
- 4.51 Roosting bats were not recorded at any other buildings (Buildings 3, 4, 7, 8 or 12) within the site during the 2022 surveys.
- 4.52 Following review of the proposed development it was noted that Trees 1, 2, 4, 7 and 8 are located at boundaries surrounding the proposed development and will not be affected by the proposed works. No presence/ absence surveys were therefore considered to be required in relation to the current proposals. Tree 6 is located within the site boundary and although retained, could be subject to disturbance, therefore further presence/ absence surveys were required for this tree.
- 4.53 No evidence of roosting bats was recorded at Tree 6 during the 2022 surveys.

- 4.54 When taking all of the survey results into consideration roosting bats have been found within the following locations at the site;
- Building 1 common pipistrelle day roost;
 - Building 11 common pipistrelle day roost.
- 4.55 Building 1 is not situated within the proposed development area and it is considered unlikely that the works will have a negative impact on this roost.
- 4.56 Overall, the presence/ absence surveys identified low numbers of common pipistrelle using the site for commuting, foraging and feeding purposes. Social calls were also recorded on one occasion. Bat species recorded during the 2020 surveys included; common pipistrelle, soprano pipistrelle and noctule.
- 4.57 Presence/ absence surveys were conducted during the optimal survey period for bats and were undertaken by suitably experienced surveyors in line with the BCT Guidance.
- 4.58 Habitats within the immediate and wider surrounds are considered to be of low value for foraging and commuting bats.

5.0 Impacts and Recommendations

Buildings

- 5.1 The results of the surveys at Chapel Lane have found the buildings and trees on site to contain varying levels of potential to support roosting bats. Building 1 was found to contain moderate potential to support bat species. Buildings 3, 4, 7, 8, 11 and 12 were found to hold low bat roosting potential to support bat species. The remaining buildings (2, 5, 6, 9 and 10) were found to hold negligible potential to support roosting bats. Buildings 1, 2, 9 and 10 (group) lie outside the proposed development site.
- 5.2 Further bat presence/ absence surveys have also been completed. Presence/ absence activity surveys completed to date have found Building 1 and Building 11 to support confirmed common pipistrelle day roosts. Building 12 is immediately adjacent to Building 11 and any proposed works on Building 12 may have impacts upon bat roosting within Building 11. Therefore, there may be implications with regard to bats and the proposed development and further presence/ absence surveys are required to establish if bats are using these buildings.
- 5.3 The further remaining buildings (2, 3, 4, 5, 6, 7, 8, 9 and 10) have been found to hold low to negligible potential. Further surveys have been undertaken where required and no roosting bats have been identified within these buildings. Therefore, there are no apparent implications in relation to these buildings and roosting bats.

Trees

- 5.4 Following the 2020 PRA and PRF surveys and 2022 updated PRA survey, Trees 1, 2, 4, 6 and 7 were found to support moderate bat roost potential and Trees 3, 5 and 8 low bat roost potential. In line with current BCT Guidelines, Trees 3, 5 and 8 do not require further presence/ absence surveys.
- 5.5 Review of the proposed development was undertaken with regard to Trees 1, 2, 4, 6 and 7. Trees 1, 2, 4 and 7 are all located at the boundary of the site and are not considered to be affected by the proposals at the site. Tree 6 is located within the site boundary and although

will be retained, may be affected by disturbance. Tree 6 was therefore subject to further presence/ absence surveys during the 2022 survey period.

- 5.6 No evidence of roosting bats was recorded during 2022 presence/ absence surveys of Tree 6. If proposals change and Trees 1, 2, 4 or 7 are to be affected by the proposed development, then further presence/ absence surveys will be required to provide current information on bat presence.
- 5.7 Ideally, the trees on site should be retained *in situ* and not be affected by the proposed development. If removal of roosting features is necessary, then compensation for loss shall be required.
- 5.8 Furthermore, if the proposals change and Tree 3 (low potential) and Tree 6 (moderate potential) which lie within the site (as opposed to on the perimeter) require removal then precautionary measures during felling should be adopted by arborists to ensure bats are not present. If bats are found to be present, then all works should stop immediately and a licensed bat consultant contacted for advice.
- 5.9 The surveys undertaken to date have found Building 1 to contain a confirmed bat roost used by small numbers of a common species. A non-echolocating bat was observed to re-enter the building under the soffit box on the south eastern elevation. Species is presumed to be common pipistrelle as no other species were identified during that survey. Building 1 is located outside the proposed development site and the building and location of the roost access point will not be affected by the proposed works.
- 5.10 Building 11 has been found to support a confirmed bat roost used by small numbers of a common bat species. One common pipistrelle was identified to re-enter the building under the barge board located on the north eastern corner of the building (#1). It is considered that Building 11 is used by a small number of common pipistrelles as a day roost over the summer period. A further possible common pipistrelle day roost location was observed on the north western corner of the building where the northern most lean to attaches to the main building. Observations were made by the surveyor and camera footage was also reviewed but 100% confirmation could not be made.
- 5.11 Building 12 is in close proximity to Building 11 on the northern and southern elevations respectively. As these buildings are immediately adjacent it is likely that any proposals that affect either of these buildings will result in disturbance to any bats present within both the confirmed roost and possible roost located at Building 11.
- 5.12 Buildings 11 and 12 will be demolished. As roosting bats have been confirmed within Building 11 then in the absence of suitable mitigation/ compensation measures under the appropriate Natural England licence, if works are undertaken that impact a bat roost either directly or indirectly, then this would result in an offence being committed under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).
- 5.13 The Local Planning Authority will require the results of these activity surveys and a suitable mitigation and enhancement scheme that demonstrates how the continued favourable conservation status of bat species found at the site will be maintained and that there will be no detrimental effect upon roosting bats by the proposed development, in line with current Planning Policy (see Section 6.0 below). This will allow the LPA to fulfil its obligations placed upon them under the Conservation of Habitats and Species Regulations 2017 (as amended).

- 5.14 Work at the site will be delayed until such a time that a Natural England Licence is applied for and granted to legally permit work to commence which would affect bats or their roosts.
- 5.15 A Natural England Licence can only be applied for once planning consent is gained. Natural England, the licensing authority, will require the species, numbers and use of a roost to be ascertained before granting a licence and there may be delays in obtaining a Licence and time constraints as to when mitigation can be undertaken.
- 5.16 The Local Planning Authority should also consider Biodiversity Net Gains in relation to bats.
- 5.17 A Section 106 agreement or similar legally binding covenant should be in place attached to any planning permission. Adequate roost provision should be agreed to ensure the favourable conservation status of bat species at the site.
- 5.18 Opportunities for roosting bats shall be incorporated as a general enhancement measure across the site in new buildings and retained trees.
- 5.19 Other enhancement measures for bats across the site could include planting of species-rich hedgerows on the boundaries of the proposed residential gardens, for foraging and commuting bats. A species-rich hedgerow could be planted on the northern side of the footpath to provide a hedged corridor which will act as a commuting and foraging corridor for bats and also as a buffer to the residential gardens from the public footpath. There will also be a minimum 8m easement within the site along the watercourse which runs along the northern boundary of the site, which will allow a foraging corridor to be retained.
- 5.20 As bats are mobile creatures and can form new roosts at any time, if works are not started within one year of this report, then it may be necessary to repeat certain surveys.
- 5.21 If at any time a bat/s or evidence of bat/s is/are suspected or found, all works must cease immediately and advice should be sought from either Natural England or the acting consultant ecologist.

Other: Breeding Birds

- 5.22 The site also contains suitable breeding bird habitat in the form of trees and buildings. A wren's nest was found in Building 9.
- 5.23 The Wildlife and Countryside Act (WCA) 1981 (as amended) states that all wild birds are protected at all times against killing or injury. Under the WCA, it is an offence to kill, injure or take any wild bird, to take damage or destroy the nest of any wild bird, or to take or destroy the egg of any wild bird. It is good practice to carry out any works outside of the breeding bird season that might affect nests and result in an offence being committed. The breeding bird season is generally considered to be between March to August inclusive.
- 5.24 It is good practice to remove all affected breeding bird habitat during the winter months prior to works starting to prevent delays. If suitable breeding bird habitat is affected during the breeding bird season, then an assessment by an Ecologist for breeding birds should be undertaken prior to works. If breeding birds are found, it is likely that works will have to be delayed until breeding has ceased.

Safeguards and Enhancement Measures

- 5.25 As best practice, opportunities for bat species identified at the site should be incorporated within any proposed development to ensure that the long-term status of bat species in the

local area is maintained. There is considerable scope for incorporation of additional bat roost features within proposed new buildings within the site to provide enhancement in addition to those proposed in Section 6.0 below.

- 5.26 Lighting schemes should be designed in accordance with best practice and ensure there are no detrimental impact upon bat roosting and foraging habitats.

6.0 Outline Mitigation Strategy

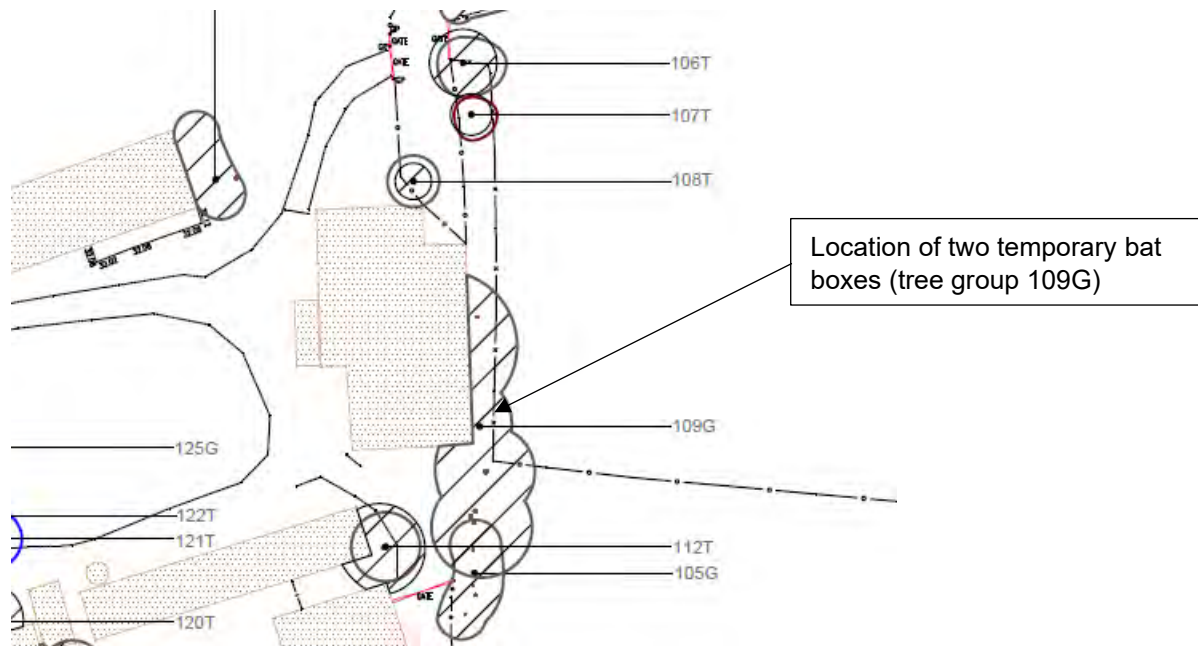
- 6.1 The proposed works will result in the loss of a confirmed roost and possible roost used by small numbers of common pipistrelle in Building 11. Building 12 adjoins Building 11 on the northern and southern elevations respectively, therefore demolition of Building 12 would also result in disturbance to any bats present within both the confirmed roost and possible roost located in Building 11.
- 6.2 The following method statement is not a replacement for a Natural England Protected Species Licence which will be required to permit works, once demolition consent and/or planning approval has been granted by the Local Planning Authority.
- 6.3 The mitigation scheme has been designed to provide a long-term replacement of two day roosts (one confirmed and one possible) used by crevice dwelling common pipistrelle bats. Enhancement is also proposed at the in line with NPPF (2021).
- 6.4 The works will include the provision of two temporary compensation roosts prior to disturbance and demolition of Buildings 11 and the adjoining Building 12. The two compensation roosts shall be installed at the site prior to works commencing and will ensure that bat species will not be left without roosting provision at any time. The two bat roosts shall compensate the temporary loss of two day roosts (one confirmed and one possible). The two bat roosts shall form temporary compensation under requirements of the Natural England licence.
- 6.5 The two compensation roosts shall comprise 2F Standard Schwegler bat boxes (or Harlech Woodstone bat boxes or similar) and shall be installed to the south and west side of the retained group of sycamores and wild cherries (106G) located directly east of Buildings 11 and 12 (see below).



Schwegler 2F General Purpose Bat Box



Harlech Woodstone



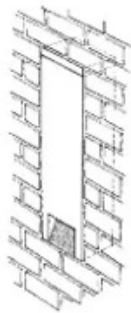
- 6.6 The demolition works will commence after the two compensation bat boxes are installed. Prior to any demolition at the site, the land owner and any other person/s involved in the demolition process at the site shall ensure that an appropriate Natural England Protected Species Licence has been granted and that the Local Planning Authority has approved the mitigation scheme.
- 6.7 The owner and any other person/s should ensure that they are familiar with the required works at the site in relation to bat/s.
- A tool box talk shall be undertaken prior to works to inform site operatives of the presence of bats at the site and the legislation relating to bats; measures that will be used to protect them; good working practices; licensable activities and what to do should a bat be found during the works.
 - Liaison between the demolition contractor and the bat licensed ecologist shall be conducted to confirm the areas that contain bat roosting potential and which require supervision.
 - The identified roosts are considered to be day roosts with a status of low conservation significance. Therefore, it is considered that the proposed works shall not impact a breeding roost. Buildings 11 and 12 are not considered suitable for bat hibernation purposes having poor thermal properties.
 - The demolition contractor shall provide a safe method of access to enable the bat licensed ecologist or their accredited agent (to be named on the Natural England Licence) to supervise the careful removal (soft demolition) of areas of bat roosting potential located at Building 11, mainly the barge boards and the timber frame between the main building and northernmost lean-to. This should render the building of less value to bats and upon completion of the soft demolition, mechanical demolition shall continue. Other crevices and gaps may also be further inspected with the use of an endoscope.
 - The contractor will carefully remove these features in a controlled and sensitive manner under the direction of the bat licensed ecologist. Mechanical demolition may be supervised in areas but once the potential is removed, the works shall continue unsupervised.

- Licensable activities will only be undertaken during suitable weather conditions with no heavy rain/snow/frost or high winds forecast.
- If a bat/s is/are located and appear well and uninjured then it/they will be captured and moved to the temporary compensation bat boxes.
- If a bat/s is/are located and appear unwell or is/are injured then it/they will be captured and taken into care with a suitably experienced local Bat Carer.

6.8 The new buildings proposed in the vicinity of the current Building 11 shall incorporate provision for three compensation roosts, located on the northern and eastern elevations. The internal bat tubes will also provide long-term roosting opportunities for bat species, in particular common pipistrelle, within the buildings. The two bat boxes located on the trees shall be retained as enhancement.

6.9 Compensation roosting opportunities will be provided by the installation of three internal bat tubes, such as the Schwegler 1FR Bat Tube or similar. Examples of internal bat tubes/roosts are provided overleaf.

Schwegler Bat tube 1FR



Schwegler 1FR Bat Tube



Ibstock enclosed bat box

6.10 Two bat tubes shall be located on the northern / north western elevation, the third shall be located on the eastern elevation of the proposed buildings. The proposed bat tubes will not be located above windows or doors and shall be sited at least 4 metres above ground level and will be installed in a sensitive and controlled manner.

6.11 The National Planning Policy Framework (NPPF) states that new development should take into account likely effects of pollution on health, living conditions and the natural environment, in particular to 'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation'. The proposed bat tubes will be located in an urban setting and are likely to be affected by a degree of light pollution. The location of the bat tubes will be chosen in areas away from windows and doors to avoid light spill from internal lighting on to roost locations, as far as possible, whilst being as close as possible to the identified bat roost thereby increasing the likelihood of the new roosts being found by bats. The precise locations of the compensation bat roosts will be confirmed at the reserved matters stage once a detailed design is available.

6.12 No monitoring is proposed in line with the recommendations of The Bat Mitigation guidelines for this type of roost.

6.13 All three compensation bat roosts and enhancement bat roosts shall remain *in situ* in perpetuity.

- 6.14 No works will be undertaken at the site until a Natural England (NE) European protected species licence is applied for and granted. A NE licence enables derogation from the Conservation of Habitats and Species Regulations 2017 (as amended) and permits works that would affect bats or their roosts to proceed.
- 6.15 The mitigation scheme outlined within this report aims to provide continued ecological functionality of two day roosts, used by small numbers of common pipistrelle. The two bat boxes located on the trees shall be retained as enhancement in line with Biodiversity Net Gain.
- 6.16 The mitigation scheme and procedures would be completed under a Natural England European protected species licence and all relevant supervision and mitigation works will be undertaken by a bat licensed ecologist and/or their named agent accordingly.
- 6.17 The mitigation scheme has been further reviewed to assess if the proposals will meet the Habitat Regulations 'three tests' and the subsequent granting of the appropriate Natural England Licence.

Purpose Test (Overriding Public Interest) & No Satisfactory Alternative Test

- 6.18 The loss of the existing roosts cannot be avoided if demolition/development works at the site are to proceed. The proposed development site falls within the boundary of two separate allocations for residential development within the adopted Halton Delivery and Allocations Local Plan [DALP] (March 2022) under Policy RD1 (Residential Development Allocations). The land has been allocated for residential development to address the need for housing within the Borough. Building 11 will no longer be required and it is proposed to demolish the building to provide residential housing. The confirmed and possible roosts are of low conservation status and compensatory roosts will be provided.

Favourable Conservation Status Test

- 6.19 The proposed compensation for the loss of the two day roosts in the form of three replacement roosts on the northern/ north western and eastern elevations of proposed new buildings, is considered to be suitable compensation for the usage of the site by the bat species identified. This will provide further long-term enhancement at the site. The mitigation scheme proposed is considered to be appropriate for the type of roosts identified, the common species found using the roost i.e. common pipistrelle. The provision of three compensation bat roosts within the proposed development is a suitable level of compensation without providing over-mitigation at the site, thereby maintaining the favourable conservation status of common species of bat that have been found using the site.
- 6.20 There will be no impact on long-term roosting for bat species, in particular common pipistrelle, at the site. The proposed compensatory bat tubes and enhancement measures will maintain the favourable conservation status of roosting provision of common pipistrelle at the site which has been found to support two day roosts used by low numbers.
- 6.21 In line with NPPF and biodiversity net gain, the two bat boxes located on the trees shall be retained as enhancement. There is also considerable scope for incorporation of further bat roost features within proposed new buildings within the site to provide additional enhancement.

7.0 Conclusion

- 7.1 To conclude, this report details the findings of all the PRA, PRF and presence/absence surveys that have been undertaken at this site.
- 7.2 All completed surveys have been undertaken by suitably experienced surveyors at the appropriate time of year and in line with current guidance.
- 7.3 No evidence of roosting bats was observed in Buildings 2, 3, 4, 5, 6, 7, 8, 9 and 10 and there are no implications regarding the removal of these buildings (Buildings 2, 9 and 10 (group) lie outside the proposed development area).
- 7.4 The 2022 surveys found evidence of a confirmed common pipistrelle day roost at Building 11 used by low numbers individuals. Surveys undertaken to date have also found Building 1 to contain a confirmed bat roost used by small numbers of a common species, presumed to be common pipistrelle. Building 1 is, however, located outside the proposed development site and the building and location of the roost access point will not be affected by the proposed works.
- 7.5 An outline mitigation scheme has been prepared to demonstrate how the continued favourable conservation status of bat species found at the site will be maintained and that there will be no detrimental effect upon roosting bats by the proposed development.
- 7.6 No evidence of roosting bats was recorded during 2022 presence/ absence surveys of Tree 6 (Trees 1, 2, 4, 5, 7 and 8 are located on the perimeter of the site and will not be affected). If the proposals change and Tree 3 (low potential) and Tree 6 (moderate potential) which lie within the site (as opposed to on the perimeter) require removal then precautionary measures during felling should be adopted by arborists to ensure bats are not present. If bats are found to be present, then all works should stop immediately and a licensed bat consultant contacted for advice.
- 7.7 Bat species recorded during the 2022 activity surveys comprised entirely common pipistrelle.
- 7.8 A Natural England Licence accompanied by an appropriate mitigation and enhancement strategy will need to be granted by Natural England in relation to Building 11 and adjoining Building 12 to derogate from the legal protection afforded bats.
- 7.9 The site also contains suitable breeding bird habitat in the form of trees and buildings and recommendations are made to avoid impacts on nesting birds.

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Figure 1:
Building and Tree Location Plan

Figure 1:
Building and Tree
Location Plan

Map Ref (NGR): 350000, 387800

-  Site Boundary
-  Buildings
-  Trees
-  Building group

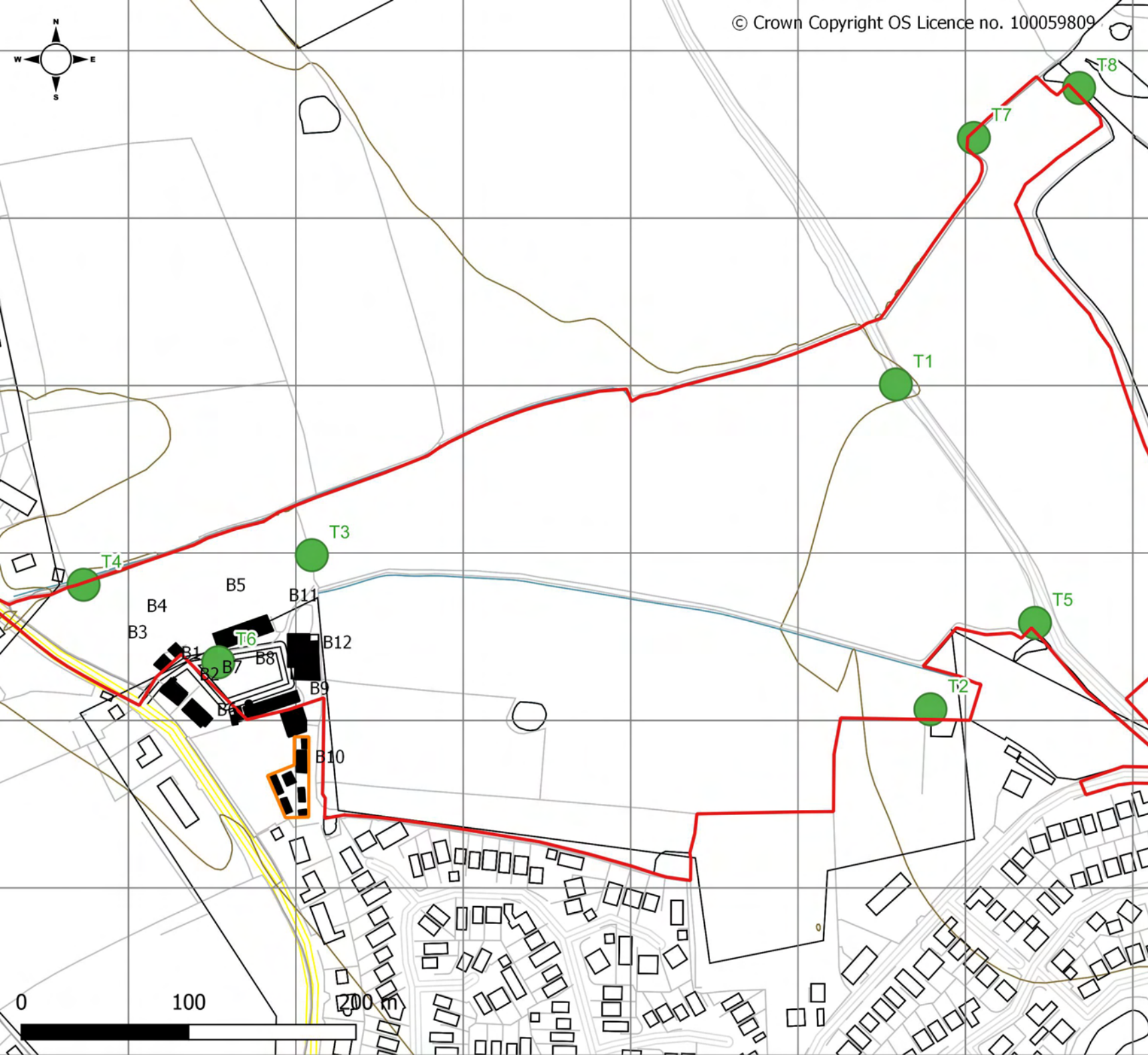


Figure 2:
Development Proposals Plan

Accommodation Schedule

Site Area (excl. Sandy Lane/Chapel Lane/Old Upton Lane Improvements): 14.11 ha
 Undeveloped Land: 5.26 ha
 Development Parcels: 8.85 ha
 Number of Homes: 350 homes
 Gross Density: 25 homes/ha
 Net Density: 40 homes/ha

Homes on rural interface not exceeding 25 homes/hectare to create soft incremental transition.

Potential future link to adjoining allocated land

Key

- Site Boundary
- Existing Trees
- Existing Hedgerows
- Existing Wetlands & Watercourses
- Indicative Attenuation Basins
- Green Infrastructure
- Development Parcels
- Public Right of Way Footpath/Cycleway
- Avenue
- Streets/Lanes
- Shared Drives
- Feature Buildings
- Vehicle gateways/Pedestrian gateways

e*SCAPE 10 years
 urbanists 2009 - 2019

Project Title
 Chapel Lane, Widnes

e*SCAPE Job No.
 022-009

Client
 Taylor Wimpey North West

Drawing Number
 022-009-P004

Revision
 REV F

Drawing Title
 Parameters Masterplan

Scale
 1:2,500 @ A3

Date
 December '22

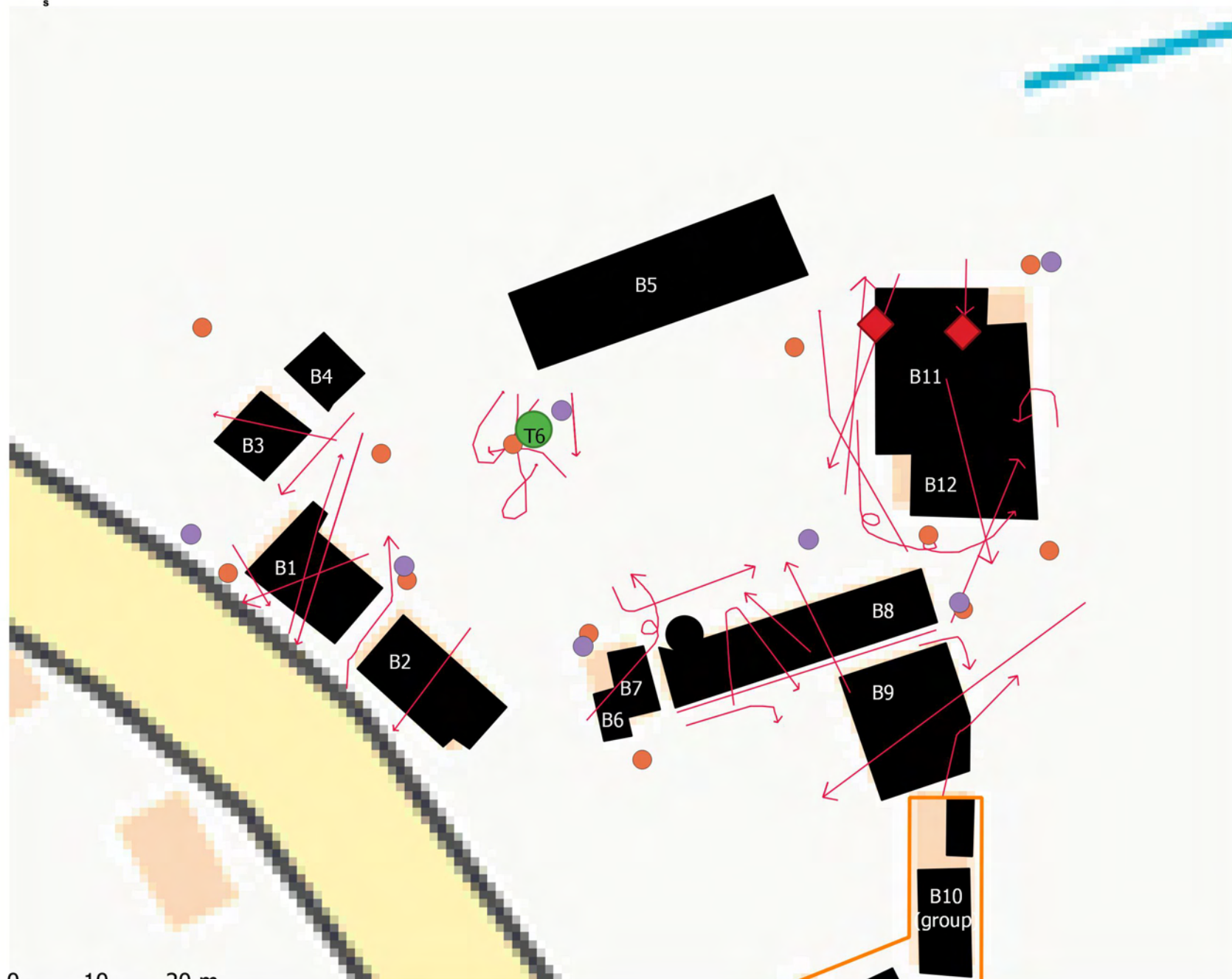
0m 20m 40m 60m 80m 100m
 Scale 1:2,500 (@A3)
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Figure 3:
Presence/ Absence Survey Results and Surveyor Location Plan

Figure 3: Surveyor positions and bat activity results

Map Ref (NGR): 350000, 387800

- Buildings
- T6
- Emergence/ re-entry point
- Camera positions
- Surveyor positions
- Flight paths
- Building group



Appendix 1: Planning Policy and Legislation

Disclaimer: Appendix 1 is a guide to legislation and procedure relating to biodiversity in England. It is general guidance and it does not give specific advice in relation to any site, species or project. It represents Ecology Services Ltd interpretation of legislation and procedure as at September 2022. Readers should note that legislation and procedure changes continually and is interpreted on a case-specific basis. Nothing in Appendix 1 should be construed as an offer of advice or legal opinion.

Planning Context

National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF, 2021) places a clear responsibility on Local Planning Authorities (LPA) to contribute to conserving and enhancing the natural and local environment. LPAs should promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species (e.g. Species of Principal importance, Biodiversity Action Plan species); and identify and pursue opportunities for securing measurable net gains for biodiversity. The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation.

A Local Planning Authority (LPA) has a duty to ensure that protected species and habitats within the UK are a 'material consideration' in the determination of a planning application. Therefore, an LPA is unlikely to determine an application until all relevant information relating to protected species or habitats is submitted to fully inform the application. Relevant information includes adequate surveys and, where required, mitigation strategies, which will need to be submitted in support of a planning application.

Statutory Protection Afforded Bats

The Conservation of Habitats & Species Regulations 2017 (as amended), also known as the Habitats Regulations, lists all UK bat species on Schedule 2 which places an obligation to implement strict protection for these species. This legislation makes it an offence to:

- deliberately kill, injure or capture a wild bat;
- deliberately disturb* a bat;
- damage or destroy a breeding site or resting place of a bat.

*Disturbance, as defined by the Conservation of Habitats & Species Regulations 2017 (as amended), is that which is likely to:

- impair their ability –
 - to survive, to breed or reproduce, or to rear or nurture their young; or
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate.
- affect significantly the local distribution or abundance of the species to which they belong.

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 continue the same provision for European protected species, licensing requirements and protected areas after Brexit.

All UK bats and their roosts are afforded further protection through their inclusion on Schedule 5 of the Wildlife & Countryside Act 1981 (as amended), which makes it an offence to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection;

- intentionally or recklessly obstruct access to a structure or place which a bat uses for shelter or protection.

Regulation 12 the Conservation of Habitats and Species Regulations 2017 (as amended) requires the appropriate authority in England and Wales to designate as Special Areas of Conservation such sites as the authority considers to be of national importance which contribute significantly to the maintenance, or restoration at favourable conservation status in the natural range of the species listed in Annex II of the EC Habitats Directive. Four bat species (greater horseshoe, lesser horseshoe, Bechstein's and barbastelle) are listed under Annex II.

When dealing with planning applications where a European Protected Species (EPS) (all UK bats) may be affected, a Local Authority is a 'competent authority' within the meaning of regulation 7 of the Conservation of Habitats & Species Regulations 2017 (as amended). The local authority must therefore exercise their functions under the provisions made within the 2017 Regulations (as amended), and planning decisions should only be made when European Protected Species and their habitats are fully taken into account.

Licensing of Works Affecting Roosting Bats

Where a bat roost is likely to be affected by development then a licence to derogate from the legal protection would be required. Licence applications are processed and issued by Natural England and can only be applied for once planning permission (if required) has been granted.

Natural England may grant a licence for the purposes specified in paragraph 55 of the Regulations. The purposes are:

- 55(2)(e) preserving public health or safety or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment.
- 55(2)(f) preventing the spread of disease.

Natural England must not grant a licence under paragraph 55 unless it is satisfied that:

- 55(9)(a) there is no satisfactory alternative; and
- 55(9)(b) the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable status in their natural range.

In December 2016, Natural England introduced four policies for European Protected Species (EPS) licensing. The policies were revised in January 2022. The policies seek to achieve better outcomes for EPS and reduce unnecessary costs, delays and uncertainty that were inherent in the current system. In brief, the four policies are:

- **Policy 1.** Reduce mitigation measures for impacts on EPS
- **Policy 2.** Location of compensation habitats
- **Policy 3.** Let EPS use temporary habitats
- **Policy 4.** Alternative sources of evidence to reduce standard survey requirements

Policy 1 allows compensation for EPS impacts to be delivered without the need to relocate or exclude populations where: exclusion or relocation measures are not necessary to maintain the conservation status of the local population; the avoid-mitigate-compensate hierarchy is followed; and compensation provides greater benefits to the local population than would exclusion and/or relocation. This policy can be used to reduce mitigation measures, such as exclusion or relocation of EPS, by increasing compensation. This policy allows killing of EPS and destruction of their habitat without needing to exclude or relocate individual animals.

Policy 2 allows for the provision of off-site compensation measures where the licensing tests are met, the avoid-mitigate-compensate hierarchy is followed, there are good reasons for maximising development on the site of EPS impacts and where an off-site solution provides greater benefit to the local population than an on-site solution.

Policy 3 relates to developments, such as mineral extraction, which temporarily create habitat which is likely to attract EPS and enables works to proceed without the exclusion of EPS where the conservation status of the local population would not be detrimentally affected. On completion of development, such sites must contribute to the conservation status of the local population as much as or more than the land use which preceded development. The measures to achieve this should be set out in a management plan and secured by a legal agreement.

Under **Policy 4** Natural England may accept a lower than standard survey effort where: the costs or delays associated with carrying out standard survey requirements would be disproportionate to the additional certainty that it would bring; the ecological impacts of development can be predicted with sufficient certainty; and mitigation or compensation will ensure that the licensed activity does not detrimentally affect the conservation status of the local population of any EPS.

Natural Environmental and Rural Communities (NERC) Act 2006

Section 40 of the Natural Environmental and Rural Communities (NERC) Act 2006 (as amended) places a statutory duty on public authorities, in exercising their functions, to conserve and enhance biodiversity in England. Species of Principal Importance for the conservation of biodiversity in England, as identified by the Secretary of State in consultation with Natural England, are listed Section 41 of the NERC Act. The Local Planning Authority and government bodies (e.g. Natural England) will expect the overall design of the development to have regard for the conservation of these species. Seven bat species are listed as Species of Principal Importance under Section 41 of the NERC Act (refer to Section 2).

Appendix 2:

Guidelines for Assessing Habitat Suitability for Bats

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats based on the presence of habitat features within the landscape, to be applied using professional judgement (Taken from the Bat Conservation Trust Bat Surveys for Professional Ecologists: Good Practice Guidelines, 2016).

Suitability	Description	
	Roosting habitats	Commuting & foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions¹ and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation²). A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential³.	Habitat that could be used by small numbers of commuting bats such as gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitats. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) of a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ¹ and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back to gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland and water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ¹ and surrounding habitat.	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broad-leaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
¹For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance. ²Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten <i>et al.</i>, 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments. ³This system of categorisation aligns with BS8596:2015 Surveying for bats in trees and woodland (BSI, 2015).		

Appendix 3:**Recommended Timings and Survey Effort for Presence/Absence Surveys**

Tables 7.1 & 7.3. Recommended timings and minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability	Moderate roost suitability	High roost suitability
<u>Structures</u> One survey visit - one dusk emergence or dawn re-entry survey ¹ . Timing - May to August.	<u>Structures & Trees</u> Two separate survey visits - one dusk emergence and a separate dawn re-entry survey ² . Timing - May to September ³ with at least one of surveys between May and August ² .	<u>Structures & Trees</u> Three separate survey visits - at least one dusk emergence and a separate dawn re-entry survey. The third visit could be either a dusk or dawn ² . Timing - May to September with at least two of surveys between May to August ² .
<u>Trees</u> No further surveys required. Precautionary approach to felling.		
¹Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis. If there is a possibility that quiet calling, late-emerging species may be present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category. ²Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more, unless there are specific ecological reasons for the surveys to be closer together (for example, a more accurate count of maternity colony is required but it is likely that the colony will soon disperse). If there is potential for a maternity colony then consideration should be given to detectability. A survey on the 31st August followed by a mid-September survey is unlikely to pick up a maternity colony. An ecologist should use their professional judgement to design the most appropriate survey regime. A dawn survey immediately after a dusk one is considered only one visit. ³September surveys are both weather and location dependant. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season.		

Appendix 4:

Population Statuses of Bat Species in Cheshire/North Merseyside

National Status

There are 18 species of bat that are native to the United Kingdom.

The latest Review of the Conservation Status of British Mammals (2018) has shown that where change could be assessed with reasonable confidence there have been increases in the geographical range and population status of two species of UK bat (greater and lesser horseshoe bat) and decrease in the geographical range of one species (grey long-eared bat). Increases in population were also identified in the following species: Bechstein's, Daubenton's, Natterers, Serotine and brown long-eared although it is noted that the reliability of the results is poor. Population data was not available for; Alcaho, whiskered, Brandts, Leisler's, noctule, Barbastelle and Nathusius pipistrelle.

Population estimates were given for common and soprano pipistrelle however they could not be reliably compared to the results from Harris et al. (1995) as the two species had not been identified as separate species at the time of that survey. *Pipistrellus* spp. remain the commonest species of bat in the UK despite their decline.

The State of Bats 2017 report produced by the Bat Conservation Trust used results from multiple survey types (hibernation, roost, waterway and field) of the National Bat Monitoring Programme (NBMP) to compile population trends between 1999, 2001 or 2002 to 2016. The report identified statistically significant (95% accuracy) population increase in Great Britain in the following species; greater horseshoe (hibernation and roost surveys), lesser horseshoe (hibernation and roost surveys), Daubenton's (hibernation surveys), Natterers (hibernation surveys), common pipistrelle (field surveys), soprano pipistrelle (field surveys). Significant decreases in population in Great Britain were identified in common pipistrelle (roost surveys), soprano pipistrelle (roost surveys) and brown long-eared (roost surveys).

These trends reflect relatively recent changes to bat populations since the 1990s. It is generally considered that prior to this there were significant historical declines in bat populations dating back to at least the start of the 20th century, although evidence is fragmented and few data were collected in a systematic way.

Serotine and barbastelle are considered vulnerable and Leisler's and Nathusius' pipistrelle, near threatened in Britain and England in the Red List for Britain's Terrestrial Mammals (Mathews and Harrower, 2020).

Cheshire Local Status

There are ten bat species listed as being resident in Cheshire; these are as follows:

- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano pipistrelle (*Pipistrellus pygmaeus*)
- Noctule (*Nyctalus noctula*)
- Leisler's (*Nyctalus leisleri*)
- Serotine (*Eptesicus serotinus*) – although these records are yet to be confirmed.
- Whiskered (*Myotis mystacinus*)
- Brandt's (*Myotis brandtii*)
- Daubenton's (*Myotis daubentonii*)
- Natterer's (*Myotis nattereri*)

- Brown long-eared (*Plecotus auritus*)

Twelve species of bat have been recorded in Cheshire, which include the above list, with the addition of the more recent discovery of Lesser Horseshoe (*Rhinolophus hipposideros*) and Nathusius Pipistrelle (*Pipistrellus nathusii*).

Populations of bats in many parts of Cheshire are comparable in size and importance to some of the best areas in the country and the size and changes are believed to mirror national trends.

Common and soprano pipistrelle are the most commonly widespread species found within the Cheshire districts and are widely distributed throughout Cheshire, being the most commonly encountered bats roosting within built structures and foraging in urban areas. Nathusius' pipistrelle has only to date been recorded at one site within Cheshire.

Brandt's and whiskered are difficult to distinguish and little is known about their distribution within Cheshire.

Noctule bats are the largest bat found in Cheshire and Leisler's are similar in appearance and may as a result be under recorded within the county.

The most recent discovery is of two lesser horseshoe bats recorded hibernating during a survey of man-made caves in the south of the county in 2009. Previous records for this species date back to 1948.

- Brandt's (*Myotis brandtii*)
- Daubenton's (*Myotis daubentonii*)
- Natterer's (*Myotis nattereri*)
- Noctule (*Nyctalus noctula*)
- Leisler's (*Nyctalus leisleri*)

North Merseyside Local Status

Eight bat species are listed as being resident in North Merseyside; these are as follows:

- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano pipistrelle (*Pipistrellus pygmaeus*)
- Brown long-eared (*Plecotus auritus*)
- Whiskered (*Myotis mystacinus*)
- Brandt's (*Myotis brandtii*)
- Natterer's (*Myotis nattereri*)
- Daubenton's (*Myotis daubentonii*)
- Noctule (*Nyctalus noctula*)

Nine native species of bat have been recorded in North Merseyside, which include the above list with the addition of Nathusius pipistrelle (*Pipistrellus nathusii*), which have been trapped and ringed at Knowsley Safari Park and identified on bat detectors in some Liverpool parks including Newsham Park.

In addition to this, an individual record of the non-native Savi's Pipistrelle (*Pipistrellus savii*) was recorded which is thought to have arrived in the UK on a ship bound for Liverpool.

Populations of bats in many parts of North Merseyside are comparable in size and importance to some of the best areas in the country and the size and changes are believed to mirror national trends.

Pipistrelle bats occur in all four of the Merseyside districts and are widely distributed in North Merseyside, being the most encountered bats roosting within built structures and foraging in urban areas.

Brown long-eared and noctule are found throughout North Merseyside but are less common.

The distribution of Daubenton's, which feed predominately over water, are localised with records from Sefton, Liverpool and St Helens.

Whiskered/Brandt's and Natterer's are rare locally, with whiskered being recorded in Sefton and St. Helens and Natterer's only recorded in St. Helens so far.

Swarming activity has only been identified in one area in North Merseyside; Rainford of up to seven species (four species of *Myotis*, common pipistrelle, soprano pipistrelle and brown long-eared) (White, Ed.) *et. al.*, 2017).

Appendix 5:
Site Photographs



Eastern elevation of Building 1



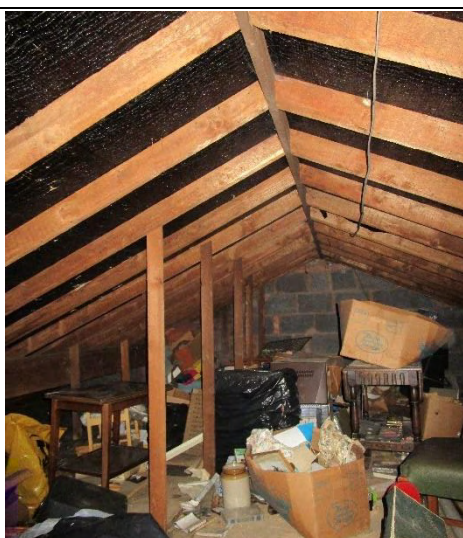
Western elevation of Building 2



Roost location on the south eastern elevation of Building 1.



Internal loft area of Building 1



Internal loft area of Building 2



Internal area of Building 4



South western elevation of Building 3



South eastern elevation of Building 4



Building 5



Northern elevation of Building 6



The northern and western elevations of Building 7



Northern elevation of Building 8



Eastern elevation of Building 9



Building 10



North western elevation of Building 11



Northern elevation of Building 11.



South western elevation of Building 11



The western elevation of Building 12.



North eastern elevation of Building 11 noting roost #1



North western elevation of Building 11 noting roost #2



Tree 1



Tree 2



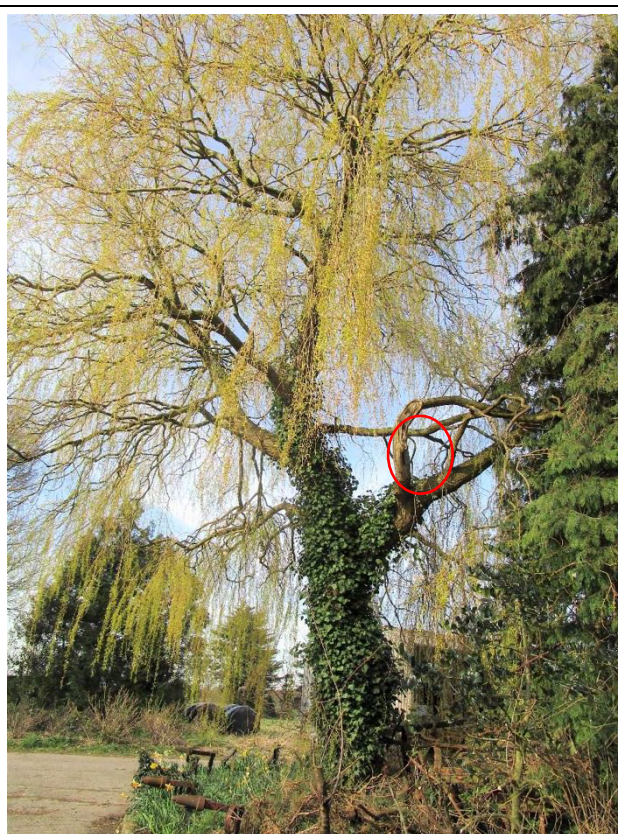
Tree 3



Tree 4



Tree 5



Tree 6



Tree 7



Tree 7

Appendix 6:
Chapel Lane, Widnes Bat & Barn Owl Survey Report (2021)

Chapel Lane, Widnes

Bat & Barn Owl Survey Report

Compiled by Ecology Services Ltd.

on behalf of

Taylor Wimpey

February 2021



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Executive Summary

Ecology Services Limited was commissioned by Taylor Wimpey in March 2020 to undertake surveys for bats in trees and buildings and a survey of the site for barn owl (*Tyto alba*) at land at Chapel Lane, Widnes. The centre of the site is located by National Grid Reference (NGR) 35004, 38780.

The site is located on the outskirts of the town of Widnes, within the Borough of Halton but on the boundary with Knowsley Council, and contains a mix of habitats including: improved and poor semi-improved grassland, species-rich and species-poor hedgerows, wet and dry ditches, two ponds, scattered trees and buildings. The land to the north and west of the site is largely under arable cultivation crossed by hedgerows and ditches with further ponds and an area of broadleaved woodland. Broadleaved woodland adjoins the site to the east, beyond which lies residential development with further residential development to the south.

The site is currently included in the draft Halton Borough Council Delivery and Allocations Local Plan 2014-2037 (2018) as a residential development site. At the time of compiling this report, no development scheme had been prepared.

The results of the Preliminary Roost Assessment (PRA) survey at Chapel Lane have found the buildings on site to contain varying levels of potential to support roosting bats. Building 1 was found to contain moderate potential for bat species and Buildings 3, 4, 7, 8, 11 and 12, low potential. Therefore, there may be implications with regard to bats and the proposed development and further presence/ absence surveys were undertaken between July and September 2020 to establish if bats are using these buildings.

Buildings 2, 5, 6, 9 and 10 have been found contain negligible potential for bat species and no evidence of past or present use of the buildings by roosting bats was found during the survey.

Trees 1 - 6 were found to contain moderate bat roost potential and were subject to further survey works. Trees 1, 3 and 5 were subject to a Potential Roost Feature (PRF) inspection survey. Tree 1 remained moderate as the feature could not be fully explored and Trees 3 and 5 had their potential to support roosting bats reduced to low. It was not safe to undertake a PRF inspection of Tree group 4 and there was no land access to Trees 2 and 6 at the time of the PRF inspection.

In line with the guidance, Buildings 1, 3, 4, 7, 8, 11 and 12 and Trees 1, 2, 6 and Tree group 4 were subject to further presence/ absence surveys, to determine if they were being used by bats. Buildings 2 and 9 were given negligible potential during the PRA survey, however, based on surveyor observations during surveys of other buildings, these buildings were subject to further presence/ absence surveys. With the exception of Building 1, no evidence of roosting bats was found during the presence/ absence surveys.

No bat roosting activity was observed in Buildings 2-12 and the level of survey undertaken is considered sufficient to provide confidence in the absence of roosting bats. Therefore, there are no apparent implications in relation to these buildings and the proposed development and roosting bats.

Presence/ absence surveys of Trees 1, 2, 6 and Tree group 4 also suggested absence of roosting bats. As best practice, however, it is recommended that a further dawn presence/ absence survey is undertaken immediately prior to any felling operations going forward. No further presence/ absence surveys are required of Trees 3 and 5, but precautionary measures should be adopted during any felling or pruning operations affecting these trees.

It is recommended that the trees on site should be retained *in situ* and not be affected by the proposed development if possible. If removal of roosting features is necessary, then compensation

for loss shall be required. As best practice, opportunities for roosting bats shall be incorporated as a general enhancement measure across the site in new buildings and retained trees.

The presence/ absence surveys of Building 1 have found the presence of a **confirmed** bat roost used by small numbers of a common bat species, therefore a Natural England European Protected Species Mitigation Licence (EPSML) accompanied by an appropriate mitigation and enhancement scheme will be required if works are to be undertaken that impact a bat roost either directly or indirectly.

If works do not commence within one year of this report, then a review of all the surveys undertaken shall be completed to assess if further update surveys are required.

Buildings 5 and 8 were found to contain suitability to support roosting barn owl and Building 11 contains an inaccessible silo that could potentially be used for breeding. No evidence of past or present use of the site by barn owl was found during the survey, including during the bat presence/ absence and bat transect surveys and data search records support evidence to suggest that they are not present at the site. Because suitable roosting and potentially nesting habitat exists at the site, it is recommended that consideration is given to the purchase of two nest boxes for a local barn owl project to aid barn owl conservation.

In the very unlikely event that barn owl is seen or suspected at any time during the further required bat presence / absence surveys or prior to or during any future demolition activities, all works must cease immediately and the acting consultant notified for advice.

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Figure 7: Presence/ Absence Survey Results and Surveyor Location Plan -Trees 1 and 2

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Appendices

Appendix 1: Planning Policy and Legislation

Appendix 2: Guidelines for Assessing Habitat Suitability for Bats

Appendix 3: Recommended Timings and Survey Effort for Presence/ Absence Surveys

Appendix 4: Population Statuses of Bat Species in North Merseyside and Cheshire

Appendix 5: Site Photographs

Appendix 6: Raw Survey Data

1.0 Introduction

- 1.1 Ecology Services Limited was commissioned by Taylor Wimpey in March 2020 to undertake a survey of buildings and trees for bats and barn owl (*Tyto alba*) at land at Chapel Lane, Widnes, hereinafter referred to as 'the site'. The centre of the site is located by National Grid Reference (NGR) 35004, 38780. The location and boundary of the site is shown on Figure 1.
- 1.2 Recommendations made following the Preliminary Roost Assessment include the requirement for further survey work in relation to bats to be carried out, including Potential Roost Feature (PRF) surveys of a number of trees and presence/ absence surveys. The results of these are provided within this report.

Site Description

- 1.3 The site is a working farm located on the outskirts of the town of Widnes, within the Borough of Halton but on the boundary with Knowsley Council, and contains a mix of habitats including: improved and poor semi-improved grassland, species-rich and species-poor hedgerows, wet and dry ditches, two ponds, scattered trees and buildings. The land to the north and west of the site is largely under arable cultivation crossed by hedgerows and ditches with further ponds and an area of broadleaved woodland. Broadleaved woodland adjoins the site to the east, beyond which lies residential development with further residential development to the south.

Proposals

- 1.4 The site is currently included in the draft Halton Borough Council Delivery and Allocations Local Plan 2014-2037 (2018) as a residential development site. At the time of compiling this report, no development scheme has been prepared.

Survey Objectives

- 1.5 The aims of the surveys were to:
 - Undertake a visual inspection of the site to establish baseline conditions;
 - Complete an assessment to ascertain if potential or evidence of use existed for bats and barn owl; and
 - Determine if there are requirements for further and/or more detailed surveys.
- 1.6 Subsequent to the findings of the Preliminary Roost Assessment for bats, further Potential Roost Feature (PRF) surveys were recommended of trees 1 – 6 identified as potentially being affected by the proposals. The aim of the PRF survey was to:
 - Undertake a further aerial visual inspection of the noted trees with the aid of a tree climber to access the PRFs previously identified;
 - Complete an assessment to ascertain if evidence of use existed for bat species or if bats were present; and
 - Determine if the level of PRF can be reclassified and if there are requirements for further surveys and/or mitigation.
- 1.7 Following the preliminary roost assessment and the PRF survey, presence/ absence surveys were recommended in the form of dusk emergence/ dawn re-entry surveys to enable robust data to be collected to determine the presence/ likely absence of roosting bats. The presence/ absence surveys included all buildings and trees that contain bat roost potential and have the potential to be affected by the proposals.
- 1.8 The purpose of this report is to state the survey methodologies, present the results of the surveys, evaluate the findings, assess the impacts of the proposals and make

recommendations concerning the protection of bat species and barn owl that may be present at this site. Where possible the report will aim to provide sufficient information to allow a local authority to assess fully the potential impacts of the proposed development on roosting bats.

2.0 Planning Policy and Legislation

- 2.1 This section provides a brief overview of planning policy and legislation relevant to bats and barn owl in the UK. Further information is provided in Appendix 1.

Planning Policy

- 2.2 The National Planning Policy Framework (NPPF, 2019) places a clear responsibility on Local Planning Authorities (LPAs) to contribute to conserving and enhancing the natural and local environment. LPAs should promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species (e.g. Species of Principal importance, Local Biodiversity Action Plan species); and identify and pursue opportunities for securing measurable net gains for biodiversity. In accordance with the NPPF, local planning policy and guidance, development proposals should seek to maintain and enhance opportunities for bats at the site.
- 2.3 Protected species within the UK, such as bats and barn owl are a 'material consideration' in the determination of a planning application. Therefore, an LPA is unlikely to determine an application until all relevant information relating to protected species or habitats is submitted to fully inform the application. Relevant information includes adequate surveys and, where required, mitigation strategies, which will need to be submitted to inform a planning application.
- 2.4 The local planning authority (LPA) has a duty to ensure that protected and priority species (e.g. Species of Principal Importance, Biodiversity Action Plan species) are fully considered in a planning decision. Therefore, up to date survey information and, where required, mitigation strategies adequate to assess the impacts of the proposals and to demonstrate that opportunities for species using the site can be maintained, must be provided in support of a planning application.

Legislation

Bats

- 2.5 All bats and their roosts receive strict protection under the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats & Species Regulations 2017 (as amended)¹, which implements the EC Habitats Directive in the UK. In brief, this legislation makes it an offence to: kill, injure or capture a bat; to destroy, damage or obstruct access to a bat roost; or to disturb a bat occupying a roost. A Local Authority is a 'competent authority' within the context of Regulation 7 of the Conservation of Habitats & Species Regulations 2017 (as amended) when dealing with planning applications where a European Protected Species (EPS) (all bat species) may be affected. Therefore, planning decisions should only be made when European Protected Species and their habitats are fully taken into account.,

¹ As amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 which continue the same provision for European protected species, licensing requirements and protected areas after Brexit.

- 2.6 Where proposed works are likely to contravene the legislation protecting bats, a Natural England licence must be applied for, and approved, before works can proceed.
- 2.7 Section 40 of the Natural Environmental and Rural Communities (NERC) Act 2006 places a statutory duty on public authorities, in exercising their functions, to conserve biodiversity in England. Species of Principal Importance for the conservation of biodiversity in England, identified by the Secretary of State in consultation with Natural England, are listed Section 41 of the NERC Act. The Local Planning Authority and government bodies (e.g. Natural England) will expect the overall design of the development to have regard for the conservation of these species. Seven bat species are listed as 'Species of Principal Importance' under Section 41 of the Natural Environmental and Rural Communities (NERC) Act 2006:
- Noctule (*Nyctalus noctula*)
 - Soprano pipistrelle (*Pipistrellus pygmaeus*)
 - Lesser horseshoe (*Rhinolophus hipposideros*)
 - Greater horseshoe (*Rhinolophus ferrumequinum*)
 - Barbastelle (*Barbastella barbastellus*)
 - Bechstein's (*Myotis bechsteinii*)
 - Brown long-eared (*Plecotus auritus*)

Barn Owl

- 2.8 Barn owls (*Tyto alba*) are included in Schedule 1 of the Wildlife & Countryside Act (WCA) 1981 (as amended), which affords them protection against disturbance whilst nesting, in addition to the basic level of protection of barn owls afforded to all wild birds. Specifically, under Part 1, Section 1 (5) it is an offence to intentionally or recklessly: disturb a barn owl whilst it is building a nest or is in, on or near the nest containing eggs or young; and / or disturb a barn owl's dependent young.
- 2.9 The WCA states that all wild birds are protected at all times against killing or injury. Under the WCA, it is an offence to kill, injure or take any wild bird, to take damage or destroy the nest of any wild bird, or to take or destroy the egg of any wild bird. It is good practice to carry out any works outside of the breeding bird season that might affect nests and result in an offence being committed. The breeding bird season is generally considered to be between March to August inclusive. However, barn owl have been known to breed throughout the year depending on available food.

3.0 Methodology

Desktop Study

- 3.1 Ecological data and records searches were undertaken by contacting the sources listed in Table 1.

Table 1: Ecological Desktop Study Sources

Source of information	Information supplied
North Merseyside and Cheshire Biodiversity Action Plans (LBAPs)	Identification of LBAP species and habitats known to occur in the region.
Natural Environment and Rural Communities (NERC) Act 2006	Review of Habitats/Species of Principal Importance known to occur in the region.

Source of information	Information supplied
Multi Agency Geographical Information for the Countryside (MAGIC) website	Statutory protected sites designated for their bat interest within 5km of the site. Records of bat roosts relating to Natural England EPS licences within the vicinity of the site.
Merseyside Biobank RECORD (Local Biological Records Centre for Cheshire, Halton, Warrington and Wirral)	Non-statutory protected sites designated for their bat interest and any records of bats within 1km of the site.

- 3.2 No site-specific data search has been undertaken for bats or barn owl. However, a data search from Merseyside Biobank and RECORD was undertaken as part of the Preliminary Ecological Appraisal in April 2019 (ESL PEA Chapel Lane, Widnes (2019) and any relevant species records have been included in this report. However, the data obtained is now over twelve months old and should be updated prior to submission of a planning application.

Preliminary Roost Assessment Survey

- 3.3 The preliminary roost assessment for buildings and trees followed the below methodology, which is based on the methods set out in the Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' (2016). Each building and tree was categorised according to its level of suitability and any evidence of roosting bats found during the inspection (see Appendix 2).
- 3.4 An interior (where possible) and exterior inspection of the buildings and a ground level inspection of trees was undertaken to search for any potential roosting features and evidence of roosting bats. Signs surveyed for included droppings, dead bats, feeding remains (beetle, moth and butterfly remains), urine staining and grease marks around crevices and down walls, and any noises such as scratching and audible bat calls. An Explorer Premium 8803AL (9mm) endoscope and a ladder were used to check accessible features. A Clulite Long Ranger LED Pistol Light (1200 lumens) and close focusing binoculars were used to better assess any features of interest not accessible. High resolution photographs were taken for later review.
- 3.5 During the survey the surrounding area was assessed in relation to suitable habitat that may be of value to bats.

Buildings

- 3.6 Preliminary roost assessments of buildings and structures can be undertaken at any of the year and can provide conclusive results, which can save expense and time for a planning applicant. The optimum time to investigate the presence of bats is usually during their active season when signs of presence can be more easily located, although this is dependent on the type of roost being inspected.

Trees

- 3.7 The optimum time to investigate trees for bat roosting potential is between November to April, when trees are not in leaf and potential roosting features such as crevices can be more easily seen. Evidence of a bat roost is best determined when bats are active although preliminary roost assessments may be conducted outside of this period and, as with the surveys of buildings/structures, inspections can provide conclusive results where all roosting features are accessible and can be exhaustively searched.

Personnel

- 3.8 The PRA inspection survey was undertaken by Mr. S. Booth who holds a Bat Class Licence Level 2 (Registration number 2016-27296-CLS-CLS) and Consultant Ecologist Miss. C. Wood (in training for a Bat Class Licence).

Timing

- 3.9 The PRA and inspection survey was conducted on the 23rd March 2020.

Weather Conditions

- 3.10 Weather conditions during the survey were good with no appreciable wind or rain affecting the survey.
- 3.11 The daytime survey was conducted at a time when limited bat activity is beginning to occur as the nights become warmer and prey becomes available. In times of bad weather bats may still revert to a state of torpor (hibernation). Presence of bats may be identified and evidence of bat occupation such as droppings and urine stains may be limited. However, depending upon species and roost location, it is possible to locate evidence of previous bat occupation even if the roost is only used seasonally.

Potential Roost Feature (PRF) Survey

- 3.12 Trees assessed as having moderate or high potential to support roosting bats during the PRA and which were identified as to be potentially affected by the proposals, were subject to further more detailed potential roost feature (PRF) surveys. Fully trained arborists climbed all accessible trees noted with bat roosting potential (Trees 1, 3 and 5) to search for bats and/or evidence of bat activity such as droppings, feeding remains (e.g. beetle, moth and butterfly remains), urine staining and grease marks around potential roosting features. A Clulite Long Ranger LED Pistol Light (1200 lumens), ladders, safety harnesses and tree climbing ropes plus an Explorer Premium 8803AL (9mm) endoscope (which is able to record images), were used to aid access to and further assess potential roosting features.
- 3.13 The results of the PRF survey of Trees 1, 3 and 5 can be found in Table 3 below.
- 3.14 It was not safe to undertake an aerial inspection of Tree group 4 and there was no land access to Trees 2 and 6 and therefore, presence/ absence surveys were undertaken of these trees.

Personnel

- 3.15 The PRF survey was undertaken by qualified arborist Mr. N. Murray, who is a fully qualified tree surgeon, under the supervision of Mr. S. Booth who holds a Bat Class Licence Level 2 (Registration number 2016-27296-CLS-CLS).

Timing

- 3.16 The PRF survey was conducted on the 10th of June 2020 when Trees 1, 3 and 5 were climbed and their features examined further to see if their potential could be re-classified.
- 3.17 The daytime survey was conducted at a time when bats are fully active and maternity colonies are in occupation. Females will have given birth and young will be present within the roost. Evidence of bat occupation is likely to be detected, should they be present at the site.

Weather conditions

- 3.18 Weather conditions during the PRF survey were good with no appreciable wind or rain affecting the survey.

Presence/ Absence Surveys

- 3.19 Presence/ absence surveys were carried out in accordance with the Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Good Practice Guidelines', which recommends timings and the minimum number of survey visits for presence/ absence surveys to give confidence in a negative result for structures (and trees although unlikely to give confidence in a negative result). See Appendix 3 for full details. These are determined by the level of potential assigned to each individual building or tree. See Appendix 2 for the full table.
- 3.20 The presence/ absence surveys required up to five surveyors on any one survey to enable all previously identified bat roosting features to be covered. Surveyors noted any visual observations of bat activity and were aided by the use of the following equipment; Batbox Duet, a heterodyne and frequency division bat detector and Magenta Bat4/Bat5, a heterodyne bat detector, used in conjunction with AnaBat SD1/2, Swift and Express detectors, which were set to record so that data could be analysed if required. A Canon XA-40 infrared camera was also used along with two no.96 infrared LED lights.

Timing

- 3.21 One dusk survey was undertaken of 7 buildings, two dusk surveys of 1 building, two dusks and a dawn survey of 1 building and a dusk and dawn survey of the trees. These were undertaken at an optimal time of year over the active breeding season of bats and when maternity colonies are in occupation. These were conducted between the 20th of July 2020 and the 7th of September 2020 inclusive and consisted of six dusk emergence surveys and two dawn re-entry surveys.

Personnel

- 3.22 The presence/ absence surveys were conducted by Senior Consultant Ecologist Mr. S. Booth who holds a Bat Class Licence Level 2 (Registration number 2016-27296-CLS-CLS), Mrs Z. Foster who holds Bat Class Licence Level 2 (Registration number 2015-17219-CLS-CLS), experienced Senior consultant ecologist, Ms. L. Redgrave and experienced consultant ecologists including; Miss. C. Wood BSc (Hons), MSc, Mr B. Meadows BSc (Hons), Mr. C. Smith, Mr. M. Barnes, Ms. K. Smycki and Ms. A. Cocker. who have regularly been involved with presence/ absence surveys.

Roost Status

- 3.23 If evidence of a bat roost is recorded during the surveys, the status of the roost is evaluated based on its function. This requires sufficient survey effort to determine the species and numbers of roosting bats present, the time of year that the roost is used and characteristics of the roost itself. The Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' details types of bat roosts which may be defined in several ways, as below:
- Day roost – where individual bats or small groups of males, rest or shelter in the day.
 - Night roost – where bats rest or shelter in the night but are rarely found during the day.
 - Feeding roost – where individual or few bat/s rest or feed during the night.
 - Transitional/occasional roost – used for short periods of time by few or occasionally small groups of bats on waking or prior to the hibernation period.
 - Swarming site – large numbers of males and females gather during late summer to autumn.
 - Mating sites – where mating takes place from late summer and through winter.
 - Maternity roost – where females give birth and raise their young.

- Hibernation roost - where bats may be found during winter. To have a constant cool temperature with high humidity.
- Satellite roost – an alternative roost used by individual to small numbers of breeding females over the breeding season. Usually close to main nursery colony.

3.24 Roost selection is often closely correlated with presence of suitable foraging habitat within a reasonable commuting distance from the roost. Different roost sites are used throughout the active season which is most dependent upon roost microclimate and abundance of invertebrate prey nearby. Weather conditions can also affect the ability of bats to successfully forage. All British bats are insectivorous.

Barn Owl Survey

3.25 Barn owls will use favoured sites for roosting and shelter throughout the year and may have more than one site within their territorial range.

3.26 The buildings on site were inspected on the interior and exterior for evidence of past or present usage by barns owls and its suitability as nesting sites for this species. This followed the standard survey method as used by the Barn Owl Trust. The following evidence was searched for:

- Droppings (white vertical streaks on roof beams and large white splashes on floors).
- Pellets - Barn owls generally swallow their prey whole and regurgitate the indigestible parts (bones, fur etc.) as pellets. The colour and condition of pellets can give an indication as to when a site was last used by barn owls.
- Feathers - Barn owl nestlings begin their initial moult at 11 months. Adult barn owls tend to shed their largest and most noticeable feathers (wing feathers) in the summer.
- Nest debris - Barn owls do not build nests but nesting areas may contain nestling fluff and pellet debris.
- Potential entrance points - The minimum entrance hole size required for barn owls to gain access to a building is 7cm by 7cm.
- Suitable nesting platforms - Barn owls need a level area to lay their eggs usually over 3m in length and over 3m off the ground. Typical nesting places include tops of walls, between bales and attic floors.

3.27 A Clulite Long Ranger LED Pistol Light (1200 lumens), close focusing binoculars and a ladder were used to aid in the survey.

Personnel

3.28 The barn owl survey was undertaken by Mr. S. Booth who holds a Barn Owl Class Licence (Registration number CL29/00099).

Timing

3.29 The barn owl survey was conducted on the 23rd March 2020.

3.30 Although barn owl can breed throughout the year, the survey was conducted outside the main barn owl nesting period, although evidence of barn owl occupation such as nests, discarded feathers, pellets and white splashing may be found throughout the year, including roosting birds. The timing of the survey did not adversely affect the results of the barn owl presence absence survey

Limitations

- 3.31 The preliminary roost assessment was conducted outside the active season of bats and when maternity colonies will not be in occupation; as a result the presence of droppings, on external elevations, which may have been deposited during the summer months, tends to be more unlikely due to the effects of wind and rain.
- 3.32 In accordance with the current COVID-19 restrictions, internal inspections of some of the buildings on site (1, 2, 3, 4 and 7) were not undertaken. These were either residential buildings or small enclosed buildings in frequent use by the owner.
- 3.33 Livestock were present in some of the buildings and therefore full internal inspections could not be carried out for health and safety reasons.
- 3.34 It was not safe to undertake a PRF inspection of Tree group 4 and there was no land access to Trees 2 and 6 at the time of the PRF. Presence/ absence surveys of these trees were therefore undertaken to address this.
- 3.35 Access to the uppermost grain silo or gantries in Building 11 was not obtained to search for barn owl or for a detailed bat assessment because it was not considered safe to do so.
- 3.36 During one activity survey on building 1 (7th September 2020), there was a security light on for the duration of the survey on the northern elevation and a small amount of vegetation was covering part of the roof on the southern elevation.
- 3.37 Overall, there are limitations to the survey undertaken and these have been taken into consideration when the conclusions, impacts and recommendations have been made.

4.0 Results and Evaluation

Desktop Study (bats and barn owl)

National Status

- 4.1 Conservation Status of British Mammals (2018) has shown that where change could be assessed with reasonable confidence there have been increases in the geographical range and population status of two species of UK bat (greater and lesser horseshoe bat) and decrease in the geographical range of one species (grey long-eared bat).
- 4.2 Increases in population were also identified in the following species: Bechstein's, Daubenton's, Natterers, serotine and brown long-eared although it is noted that the reliability of the results is poor.
- 4.3 Population data was not available for; Alcaholic, whiskered, Brandts, Leisler's, noctule, Barbastelle and Nathusius pipistrelle.
- 4.4 Population estimates were given for common and soprano pipistrelle however could not be reliably compared to the results from Harris et al. (1995) as the two species had not been identified as separate species at the time of the survey. *Pipistrellus* spp. remain the commonest species of bat in the UK despite their decline.
- 4.5 Serotine and barbastelle are considered vulnerable and Leisler's and Nathusius' pipistrelle, near threatened in Britain and England in the Red List for Britain's Terrestrial Mammals (Mathews and Harrower, 2020).

- 4.6 The most up to date information on the national status of barn owl is from 2019, 'State of the UK Barn Owl Population 2019'. In 2019, data was received from 40 monitoring schemes, which showed that the number of nesting pairs at monitored sites in the UK was 21% higher than the all-years average. Regionally there was considerable variation with generally good results in the east, relatively poor in much of the west and mixed in the south. At 2.8, the mean brood size in 2019 was neither bad nor particularly good when compared to the average of all previous years.

Regional Status

- 4.7 The north west of England appears to be a stronghold for Whiskered and Brandt's, both of which are reasonably rare in southern England.
- 4.8 The most up to date regional status of barn owl is from 2018 '*State of the UK Barn Owl Population 2018*' (Barn Owl Trust, 2019). This reported that Cheshire Barn Owl Groups had a good year, probably reflecting a good summer despite a cold early spring. No data was available on North Merseyside.

Local Status

North Merseyside

- 4.9 The North Merseyside Local Biodiversity Action Plan (LBAP) lists eight bat species recognised as being resident in North Merseyside (refer to Appendix 4) as local priority species.

Cheshire

- 4.10 The Cheshire Local Biodiversity Action Plan (BAP) lists ten bat species recognised as being resident in Cheshire (refer to Appendix 4) as local priority species.
- 4.11 Barn owl is listed as Local BAP species in Cheshire.

Designated Sites

- 4.12 There are no statutory or non-statutory protected sites designated on the basis of their interest for bats or barn owl that are located within the vicinity of the site and which could be adversely affected by the proposed development of the site.

Records Data Search

- 4.13 The data search found nineteen records of multiple species of bats including common pipistrelle, soprano pipistrelle, brown long-eared bat and noctule within 2km of the site, dating from between 1988 to 2009. The nearest record is located approximately 560m from the site, dating from 1994 and is pertaining to a grounded bat (species unconfirmed) found by a member of the public.
- 4.14 The data search found two records of barn owl approximately 2km from the site to the north east, dated 1999.
- 4.15 Records of European Protected Species mitigation licences for bats in the area surrounding the site include a licence relating to common pipistrelle at a location approximately 3.3km to the south of the site and a licence relating to common pipistrelle, soprano pipistrelle, brown long-eared bat and natterers pertaining to a location approximately 3.3km north west of the site.

Preliminary Roost Assessment and Barn Owl Survey

Habitat Assessment (Bats)

- 4.16 The site is located on the outskirts of the town of Widnes, within the Borough of Halton but on the boundary with Knowsley Council, and contains a mix of habitats including: improved and poor semi-improved grassland, species-rich and species-poor hedgerows, wet and dry ditches, two ponds, scattered trees and buildings. The land to the north and west of the site is largely under arable cultivation crossed by hedgerows and ditches with further ponds and an area of broadleaved woodland. Broadleaved woodland adjoins the site to the east, beyond which lies residential development with further residential development to the south.
- 4.17 The site is connected by hedgerows and ditches to foraging areas in the wider landscape comprising woodland to the north and east of the site. Areas of particular note include Alder Brook, George's Wood and Pex Hill Country Park which are all Local Wildlife Sites (LWS) within 1km of the site. These areas are likely to provide good quality foraging habitat and other roosting opportunities for bats. Buildings within Eccleston, and farm buildings and houses to the south-west of the site are also likely to provide roosting opportunities bats.
- 4.18 Overall, habitats within the immediate and wider surrounds of the surveyed buildings are considered of low value for foraging and commuting bats. Where suitable habitats are present in close proximity to buildings/structures/trees then there is generally an increased use of these for roost sites due to a higher abundance of food and better access to food sources.

Habitat Assessment (Barn Owl)

- 4.19 In the immediate vicinity of the site, foraging habitat is limited due to intensive agricultural land use, which has minimal available rough grassland, other than where a number of ditches or pond margins have removed the opportunity to produce crops or provide grazing. In general, the surrounding foraging habitat is considered to be of low value to barn owls.
- 4.20 Barn owls in a mixed landscape require between 17 and 26ha of rough grassland, or 43km of rough grass field margins c.4-6m wide within 2km of the nest (or a mixture of the two). However, to support a viable breeding population of barn owls over a wider area, the land beyond a 2km radius also needs to be suitable. It is estimated that between 1.4 and 2% of the total land area in a mixed landscape needs to be rough grassland (Askew, 2006).
- 4.21 In the wider survey area there are heavily populated areas to the south including Hough Green, Ditton and Appleton along with Lunts Heath to the east. The busy A5080, Cronton and Town End jointly form a dispersal barrier to the north with the only major potential recruitment opportunities for birds being from the west.

Buildings / Structures

- 4.22 A description of the buildings/ structures can be found in the Table 2 below and overleaf. Photos of buildings/ structures with annotations showing locations of potential roosting features are provided in Appendix 5.

Table 2: Description of Buildings/ Structures

Building 1
Description:
A single storey, residential bungalow with a small, rear external porch extension on the eastern elevation. The bungalow is brick built with concrete roof and ridge tiles with wooden fascias/ soffit boxes and uPVC guttering. It has a pitched roof with two, brick-built chimney stacks.
The extension is brick built with a flat, felted roof. The window frames are uPVC.

No internal access was gained to the building due to health and safety re: COVID-19.
Bat roost potential signs:
There are small gaps under the flashing where the chimney meets the roof on the western elevation. There are numerous places where the soffit box is damaged or open on the western elevation and northern gable. However, the soffit boxes are not thermally efficient and unlikely to provide suitable conditions for roosting bats. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have low potential for roosting bats.
Barn owl roost or breeding potential signs:
The building offers no roosting or nesting opportunities for barn owl.
Building 2
Description:
A single storey, residential bungalow with an extension on the southern elevation. The bungalow is brick built with concrete roof and ridge tiles with uPVC fascias/ soffit boxes and guttering. It has a pitched roof with a brick built chimney. The extension is brick built with a flat, felted roof. The window frames are plastic. No internal access was gained to the building due to health and safety re: COVID-19.
Bat roost potential signs:
There are small, negligible gaps where mortar is missing under roof tiles and the ridge tiles and under the flashing where the chimney meets the roof on the western elevation. There is a gap in the brickwork caused by a crack in the chimney on the western elevation. This gap was open to the elements and likely would be wet inside. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have negligible potential for roosting bats.
Barn owl roost or breeding potential signs:
The building offers no roosting or nesting opportunities for barn owl.
Building 3
Description:
A single storey, timber shop with a pitched, corrugated asbestos roof with wooden windows and doors. There are no fascias or soffits present. The building is covered with a mix of wooden weather boarding and plywood sheeting. No internal access was gained to the building due to health and safety re: COVID-19.
Bat roost potential signs:
A small gap is present at the apex of the gable on the southern elevation. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have low potential for roosting bats.
Barn owl roost or breeding potential signs:
The building offers no roosting or nesting opportunities for barn owl.
Building 4
Description:

A single storey, shed type building with a pitched, felted roof. The building has a concrete base and wooden boarding. There are metal doors on the southern elevation, a window on the eastern elevation and on the northern elevation, a portion of the wall has been re-built with bricks that have been sealed with expanding foam. No internal access was gained to the building due to health and safety re: COVID-19.
Bat roost potential signs: There are gaps between the wooden boards leading into the interior of the building. There are gaps halfway down the building where the wooden boarding joins the concrete base. On the western elevation there is a hole where a grille for an extractor fan has fallen out which leads inside. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have low potential for roosting bats.
Barn owl roost or breeding potential signs: The building offers no roosting or nesting opportunities for barn owl.
Building 5
Description: A large, single storey, metal framed barn with a pitched, asbestos covered, corrugated roof. The barn is entirely open to the south side and currently contains circular hay bales and farm vehicles. The north elevations and both gable ends are clad in wood panelling. Overall, the building is open and has no thermal properties, limiting its suitability for bats.
Bat roost potential signs: No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have negligible potential for roosting bats.
Barn owl roost or breeding potential signs: Some roosting opportunities exist on the steel roof structure and on ledges in the roof space. There are potential roosting opportunities within farm machinery and within bales. However, all these items are subject to being moved as part of agricultural activities. No evidence of barn owl was found during the inspection of the building.
Building 6
Description: A single storey garage with a lean-to attached the eastern elevation used for storage. The garage has a timber frame with asbestos sheets for roofing and wooden fascias. There are no windows but wooden doors are present on the northern elevation. There are scrub and trees directly adjacent to the western and southern elevations, limiting access by bats. The lean-to is wooden framed and open to the northern elevation with wooden fascias. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. Internally the roof is timber framed and the walls are timber with plaster boarding.
Bat roost potential signs: There is a gap at the apex of the northern gable that leads into the building. There are also gaps along the ridge and at the top of the fascias where they meet the roof and also underneath the fascias that lead inside. Internally, the building has little to no roost potential due to the lack of roosting sites and the thermal properties of the building are such that will cause the temperature within the buildings to fluctuate. The building is considered to have negligible potential for roosting bats.

Barn owl roost or breeding potential signs:
The building offers no roosting or nesting opportunities for barn owl.
Building 7
Description:
A single storey, concrete block garage with a pitched roof comprising corrugated asbestos sheeting. There are wooden fascias and uPVC guttering. There is a wooden door and a small window on the western elevation and a window on the northern elevation. Part of the western elevation is obscured by the lean-to attached to Building 6 and part of the eastern elevation is obscured by scrub. No internal access was gained to the building due to health and safety re: COVID-19.
Bat roost potential signs:
The wooden barge boards on the northern and southern elevations are in poor repair and there are numerous gaps including at the apex. The southern elevation, however, is cluttered and obscured with scrub, limiting access by bats. There are areas of lifted flashing on the roof; it was not possible to determine if these provided entry into the building. The western and eastern elevations had small gaps present under the guttering, however these were heavily cobwebbed indicating no access by bats had been gained. There were no grease stains or other rubbing marks which would have been caused by bats accessing these areas. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have low potential for roosting bats.
Barn owl roost or breeding potential signs:
The building offers no roosting or nesting opportunities for barn owl.
Building 8
Description:
A large, single storey, timber former chicken cabin, now used to house goats and sheep. The roof is pitched and covered by asbestos corrugated sheets. Internally the building is open plan with sections to segregate animals. The roof structure is timber with supporting trusses and there is no loft space. A full internal inspection was not undertaken due to animals being present in the building and as such, the internal portions were viewed from outside.
Bat roost potential signs:
There are lots of entry points into the building on the northern and southern elevations through open windows, doors and vents. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use. The building is considered to have low potential for roosting bats.
Barn owl roost or breeding potential signs:
The building could be used by barn owl for roosting but is not considered to be ideal because of the low roofline. No evidence of barn owl was found during the inspection of the building.
Building 9
Description:
A timber and metal framed agricultural building, currently used for housing cattle. It has a pitched roof with corrugated sheeting and plastic skylights. The southern part of the building has a single pitched roof. The building has a concrete block base with a mixture of corrugated metal sheeting

and wooden boards on the upper part. Internally the building is a mixture of timber frame and metal girders.

There are metal barge boards on the eastern and western elevations and guttering on the northern and southern elevations. The building is open to the northern and eastern elevations. The wooden boards on the southern and western elevations have large gaps that are open to the inside of the building.

There is a store room within the building that is timber framed and has an open doorway to the eastern elevation.

Bat roost potential signs:

The building is open and draughty and there are very few suitable roosting places.

No droppings or any other evidence of the presence of bats was identified which suggested present or historic use.

The building is considered to have **negligible** potential for roosting bats.

Barn owl roost or breeding potential signs:

The building could be used by roosting barn owl but it is largely open and draughty.

Building 10

Description:

A group of timber sheds in a poor, dilapidated state of repair. The sheds are very cluttered with trees, overgrown scrub and tall vegetation surrounding them, offering no suitable flight lines and limiting access by bats.

The buildings that were still standing, were in an unsafe state to enter.

Bat roost potential signs:

There are no suitable features present for roosting bats. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use.

The buildings are considered to have **negligible** potential for roosting bats.

Barn owl roost or breeding potential signs:

The buildings offer no roosting or nesting opportunities for barn owl.

Building 11

Description:

A large, metal framed building housing multiple grain silos. The building is clad in a mix of corrugated steel sheeting and asbestos panels. The roof is pitched and covered with asbestos sheets. On the top of the roof is a small Cupola type structure clad with corrugated metal sheets with a metal sheet covered, pitched roof.

Internally the building is open plan containing steel frames and silos with multiple steel ledges and beams. There are wooden gantry walkways accessible via a ladder but these were not considered safe to access.

Bat roost potential signs:

The building is large and draughty and there appeared to be very few suitable roosting places where the surveyor could gain access. The high gantry walkways, however, were not considered safe to use and it was not possible, therefore, to fully inspect the building.

The building is not considered to have good thermal properties.

No droppings or any other evidence of the presence of bats was identified which suggested present or historic use.

The building is considered to have **low** potential for roosting bats.

Barn owl roost or breeding potential signs:
The uppermost silo is accessible to barn owl and it could not be viewed safely. It is considered possible that barn owl could roost or even breed within it, but no evidence of barn owl was found in any other part of this building.
Building 12
Description:
An agricultural building used to store vehicles and equipment. There is a lean-to on the eastern elevation that housed a bull at the time of survey.
The building has a concrete block base, corrugated metal sheeting and asbestos sheeting to the upper part and corrugated asbestos sheeting on the roof with plastic skylights. There are wooden fascias on the eastern and western elevations and asbestos barge boards on the southern elevation.
The lean-to is a wooden, timber framed structure with wooden pallet roofing. The lean-to is open to the southern elevation and through to Building 11 at the northern elevation. The internal area of the lean-to could not be accessed due to the presence of the bull.
The building is not considered to have good thermal properties.
Internally the building is timber framed with a raised area in the south eastern corner of the building that is formed by wooden boarding and plasterboard.
Bat roost potential signs:
There are gaps underneath the fascias on the western elevation and the barge boards on the southern elevation. There are also gaps behind the asbestos sheeting on the western and southern elevations where they meet the roofline, which may lead into the building.
There were no grease stains or other rubbing marks which would have been caused by bats accessing these areas. No droppings or any other evidence of the presence of bats was identified which suggested present or historic use.
The building is considered to have low potential for roosting bats.
Barn owl roost or breeding potential signs:
The buildings offer no roosting or nesting opportunities for barn owl.

- 4.23 Taking into account the moderate and low bat roost potential contained within Buildings 1, 3, 4, 7, 8, 11 and 12 respectively, further bat activity surveys are recommended.
- 4.24 Buildings 2, 5, 6, 9 and 10 were found to contain negligible potential to support roosting bats and no further activity surveys are deemed to be required for these buildings.
- 4.25 Buildings 5, 8 and 11 were considered to have suitability to support barn owl. However, no signs of occupation past or present were found in any of the buildings.
- 4.26 A description of the trees subject to PRA can be found in Table 3 overleaf. Results of the PRF survey are also included within this table. Photos of the trees with annotations showing locations of potential roosting features are provided in Appendix 5. Trees which were found to have negligible potential to support roosting bats are not included within the table below.
- 4.27 None of the trees on site or adjacent to the site were suitable to support roosting or nesting barn owl.

Table 3: Description of Trees.

Tree 1
Description:
A mature oak (<i>Quercus</i> sp.) tree approximately 15m tall on the edge of a field boundary adjacent to Sandy Lane.
Bat roost potential signs:
There is a large knot hole at 4m on the eastern elevation of the tree. The tree was considered to have moderate potential for roosting bats.
PRF Survey Results:
Tree 1 was subject to an examination and the feature identified within the PRA was found to recede to a depth where it could not confidently be fully searched or reclassified. The tree's potential to support roosting bats therefore remains as Moderate .
Tree 2
Description:
A mature sycamore (<i>Acer pseudoplatanus</i>) tree approximately 15m tall. The tree is located on adjacent land along the site boundary.
Bat roost potential signs:
An upward facing knot hole is present at 2m on the knuckle of a branch on the northern elevation of the tree. The knot hole could be water filled, but it could equally recede into the trunk of the tree, but access was not possible to confirm. The tree was considered to have moderate potential for roosting bats.
Tree 3
Description:
An ash (<i>Fraxinus excelsior</i>) tree approximately 18m tall, located to the north of the farm buildings.
Bat roost potential signs:
There is an old tear-out wound at 6m, which is 10cm in diameter. The cavity is upward facing but it could recede into the trunk of the tree. The tree was considered to have moderate potential for roosting bats.
PRF Survey Results:
Tree 3 was subject to a thorough examination and the feature identified within the PRA were found not to recede to a depth that would be suitable to support roosting bats. The tree potential to support roosting bats has therefore been reclassified as Low .
Tree Group 4
Description:
A line of dead trees on the northern boundary of the site on adjacent land.
Bat roost potential signs:
A many of the trees have delaminating bark with negligible or low bat roosting potential, but the delamination on one tree in particular was considered to offer a moderate level of roosting suitability. The tree was considered to have moderate potential for roosting bats.
Tree 5
Description:
A mature, multi-stemmed sycamore tree approximately 10m tall. Two of the stems had split creating cavities approximately 2-3m high on the northern elevation of the tree.

Bat roost potential signs:
Cavities were present on two of the stems. It could not be established how far up the cavities receded into the trunks. The tree was considered to have moderate potential for roosting bats.
PRF Survey Results:
Tree 5 was subject to a thorough examination. The features identified within the PRA were both narrow and found to recede to a depth of approximately 450mm with a 3-4cm diameter. Internally the timber was rotting, particularly at the top and wet. There were clusters of leopard slugs (<i>Limax maximus</i>) at the tops of both of the cavities. Given that the features allow for water to ingress, the tree potential to support roosting bats has therefore been reclassified as Low .
Tree 6
Description:
A mature, weeping willow approximately 15m high. The lower part of the tree is densely covered with ivy (<i>Hedera helix</i>). There is a damaged limb approximately 5-6m high on the southern elevation.
Bat roost potential signs:
A rot hole is present on a broken limb approximately 5-6m high on the southern elevation. It could not be determined if the hole receded into the limb. The tree was considered to have moderate potential for roosting bats.

- 4.28 Following the preliminary roost assessment Trees 1 - 6 were found to contain **moderate** bat roost potential. Following the potential roosting feature survey, Trees 3 and 5 were reclassified as **low** whereas Tree 1 has retained **moderate** potential for roosting bats.
- 4.29 It was not safe to undertake a potential roosting feature survey of Tree group 4 and there was no land access to Trees 2 and 6 and as such, they retain **moderate** potential to support roosting bats.
- 4.30 All other trees surveyed had no suitable potential roosting features and therefore **negligible** potential to support roosting bats.

Presence/ Absence Survey Results

- 4.31 The raw data from the presence/ surveys can be found within Appendix 6. An overview of dates, times and the results of the surveys are provided below and overleaf. In addition to the buildings identified as requiring further surveys during the PRA survey (Buildings 1, 3, 4, 7, 8, 11 and 12), as a result of surveyor observations made during the surveys of these buildings, one presence/ absence survey of Building 2 and two presence/ absence surveys of Building 9 were also undertaken. Due to confirmation of a roost in Building 1 during the surveys, a total of three presence/ absence surveys of Building 1 were undertaken.

Table 4: Overview of Presence/ Absence Surveys

Date of surveys & survey type	Start & end times and time of Sunset/ sunrise	Structure reference/ location	Equipment used	Weather Conditions
Dusk 20.07.20	Start time: 20:54 End time: 22:54 Sunset time: 21:24	Building 1 Building 3, Building 4 & Tree 6	Bat box duet used in conjunction with AnaBat SD1/2 detectors, Anabat express detectors and an Anabat Swift detector.	Start Temp: 15°C Sunset Temp: 11.8°C Finish Temp: 8.1°C Precipitation: Dry Wind: Light breeze (BS1*)

Date of surveys & survey type	Start & end times and time of Sunset/sunrise	Structure reference/ location	Equipment used	Weather Conditions
				Cloud Cover: 0%
Comments: Five surveyors were required to cover all suitable potential roosting features identified.				
Dusk 21.07.20	Start time: 20:53 End time: 22:53 Sunset time: 21:23	Building 7 Building 8 & Tree group 4	Bat box duet used in conjunction with AnaBat SD1/2 detectors, Anabat Express detectors and an Anabat Swift detector.	Start Temp: 14°C Finish Temp: 12°C Precipitation: Dry Wind: Calm (BS0*) Cloud Cover: 60%
Comments: Five surveyors were required to cover all suitable potential roosting features identified.				
Dusk 22.07.20	Start time: 20:53 End time: 22:53 Sunset time: 21:23	Tree 1 & Tree 2	Bat box duet used in conjunction with AnaBat SD1/2 detectors.	Start Temp: 16.9°C Sunset Temp: 17.5°C Finish Temp: 15.2°C Precipitation: Dry Wind: Light breeze (BS1-3*) Cloud Cover: 100%
Comments: Two surveyors were required to cover all suitable potential roosting features identified.				
Dusk 27.07.20	Start time: 20:44 End time: 22:44 Sunset time: 21:14	Building 11 & Building 12	Bat box duet used in conjunction with AnaBat SD1/2 detectors, Anabat Express detector and a Canon XA-40 infrared camera.	Start Temp: 15°C Sunset Temp: 15°C Finish Temp: 14°C Precipitation: Dry Wind: Light breeze (BS0-1*) Cloud Cover: 5%-80%
Comments: Three surveyors were required to cover all suitable potential roosting features identified.				
Dusk 30.07.20	Start time: 20:39 End time: 22:39 Sunset time: 21:09	Building 2 & Building 9	Bat box duet used in conjunction with AnaBat SD1/2 detectors, Anabat Express detector and a Canon XA-40 infrared camera.	Start Temp: 23.6°C Sunset Temp: 20.5°C Finish Temp: 17.8°C Precipitation: Dry Wind: Light breeze (BS1*) Cloud Cover: 50%
Comments: Two surveyors were required to cover all suitable potential roosting features identified.				
Dawn 19.08.20	Start time: 03:59 End time: 06:14 Sunrise time: 05:59	Building 1, Tree group 4 & Tree 6	Bat box duet, Magenta Bat 4 and Magenta Bat 5 used in conjunction with AnaBat SD1/2 detectors.	Start Temp: 16.3°C Finish Temp: 12.7°C Precipitation: Dry Wind: Calm (BS0*) Cloud Cover: 10%
Comments: Four surveyors were required to cover all suitable potential roosting features identified.				

Date of surveys & survey type	Start & end times and time of Sunset/sunrise	Structure reference/ location	Equipment used	Weather Conditions
Dawn 01.09.20	Start time: 04:21 End time: 06:36 Sunrise time: 06:21	Tree 1 & Tree 2	Bat box duet used in conjunction with AnaBat Express detectors.	Start Temp: 10.8°C Finish Temp: 9.2°C Precipitation: Dry Wind: Calm-Light breeze (BS0-1*) Cloud Cover: 100%-30%
Comments: Two surveyors were required to cover all suitable potential roosting features identified.				
Dusk 07.09.20	Start time: 19:15 End time: 21:15 Sunset time: 19:45	Building 1 & Building 9	Bat box duet and Magenta Bat 4 used in conjunction with AnaBat SD1/2 detectors, Anabat Express detector and a Canon XA-40 infrared camera.	Start Temp: 18.2°C Sunset Temp: 17.2°C Finish Temp: 17.2°C Precipitation: Dry Wind: Calm (BS0*) Cloud Cover: 100%
Comments: Four surveyors were required to cover all suitable potential roosting features identified.				

* BS – Beaufort Scale

Presence/ Absence Survey No. 1: Buildings 1, 3, 4 and Tree 6 (20.07.20)

- 4.32 No evidence of bat emergence was identified by any of the surveyors.
- 4.33 Commuting and foraging activity was identified at the site surrounding the surveyed buildings (1, 3 and 4), mainly located along the tree line to the north of the buildings. Commuting and foraging activity was observed around Tree 6 in the farmyard of the site. Bat species identified comprised common pipistrelle and soprano pipistrelle bats. During the survey, a surveyor noted that there may have been a possible emergence from Building 2, therefore a dusk survey of Building 2 was subsequently undertaken.

Presence/ Absence Survey 1: Buildings 7, 8 and Tree Group 4 (21.07.20)

- 4.34 No evidence of bat emergence was identified by any of the surveyors.
- 4.35 Commuting and foraging activity was identified at the site surrounding the surveyed buildings (7 and 8) and along the treeline to the east of the farmyard. Foraging and commuting activity was also noted along the tree line on the northern boundary of the site around Tree group 4. Bat species identified comprised common pipistrelle and noctule. During the survey, a surveyor noted that there were bats foraging within Building 9 early on during the survey. As it could not be confirmed whether the bats had emerged from within Building 9 or flown in to forage, subsequent surveys of Building 9 were undertaken.

Presence/ Absence Survey 1: Trees 1 and 2 (22.07.20)

- 4.36 No evidence of bat emergence was identified by any of the surveyors.
- 4.37 Commuting and foraging activity was identified at the site surrounding the surveyed trees (1 and 2). Activity was identified around the woodland adjacent to Tree 2 and along the hedgerow that runs parallel to Sandy Lane adjacent to Tree 1. Bat species identified comprised common pipistrelle and soprano pipistrelle.

Presence/ Absence Survey 1: Buildings 11 and 12 (27.07.20)

- 4.38 No evidence of bat emergence was identified by any of the surveyors.
- 4.39 Commuting and foraging activity was identified around the surveyed buildings (11 and 12) and along the tree line running to the east of the buildings. Bat species identified comprised exclusively common pipistrelle.

Presence/ Absence Survey 1: Buildings 2 and 9 (30.07.20)

- 4.40 No evidence of bat emergence was identified by any of the surveyors.
- 4.41 Commuting and foraging activity was identified around the surveyed buildings (2 and 9). Bats were identified foraging within Building 9 (2 maximum at one time), however, it could not be confirmed by the surveyor or the camera, whether the bats entered the building to forage or emerged from within the building. Therefore, a further survey was undertaken on 07.09.20. Bat species identified comprised common pipistrelle and noctule.

Presence/ Absence Survey 2: Building 1, Tree group 4 and Tree 6 (19.08.20)

- 4.42 A re-entry was observed into the south eastern elevation of Building 1 at 05:18, considered to be common pipistrelle. No other re-entries were identified by any of the surveyors.
- 4.43 Commuting and foraging activity was identified around Building 1 and trees (Tree 6 and Tree group 4) throughout the survey. The majority of the activity around Building 1 was heard not seen, commuting was identified over Building 1 in a westerly direction towards the road. No bats were seen around Tree 6 within the farm yard. Activity was identified along the tree line on the northern boundary of the site adjacent to Tree group 4. Bat species identified comprised exclusively common pipistrelle.

Presence/ Absence Survey 2: Trees 1 and 2 (01.09.20)

- 4.44 No evidence of bat re-entry was identified by any of the surveyors.
- 4.45 A small amount of commuting and foraging activity was identified around the surveyed trees (1 and 2) but there was no interaction with either of the trees. Bat species comprised exclusively common pipistrelle.

Presence/ Absence Survey 2: Building 9 and Presence/ Absence Survey 3: Building 1 (07.09.20)

- 4.46 No evidence of bat re-entry was identified by any of the surveyors.
- 4.47 Commuting and foraging activity was identified around the surveyed buildings (1 and 9) throughout the survey. Activity around Building 1 was mainly directed along the tree line to the north of the building with activity from the road to the east. Activity around Building 9 included along the tree line to the east of the building, between Buildings 8 and 9 and foraging within the building. During the survey it was confirmed that the bats entered the building from the tree line to the east to forage and were not found to be roosting within the building. Bats were seen to enter and exit the building multiple times throughout the survey by both surveyors and the camera. Bat species identified comprised exclusively common pipistrelle.

Summary and Evaluation (Bats)

- 4.48 The preliminary roost assessment found Building 1 to contain **moderate** bat roost potential and Buildings 3, 4, 7, 8, 11 and 12 to contain **low** bat roost potential when considering the presence of potential roosting features, as noted within Table 1.

- 4.49 The preliminary roost assessment found Buildings 2, 5, 6, 9 and 10 to contain **negligible** bat roost potential, as noted within Table 1.
- 4.50 Following the preliminary roost assessment Trees 1-6 were assigned **moderate** bat roost potential when considering the presence of potential roosting features, as noted within Table 2. Following the potential roosting feature survey, Trees 3 and 5 were reclassified as **low** potential whereas Tree 1 retained **moderate** potential for roosting bats.
- 4.51 It was not safe to undertake an aerial inspection of Tree group 4 and there was no land access to Trees 2 and 6 and as such, they retain **moderate** potential to support roosting bats.
- 4.52 In line with the guidance, Buildings 1, 3, 4, 7, 8, 11 and 12 and Trees 1, 2, 6 and Tree group 4 were subject to further presence/ absence surveys, to determine if they were being used by bats.
- 4.53 Buildings 2 and 9 were given negligible potential during the PRA survey. However, during presence/ absence surveys conducted on adjacent buildings (20.07.20 and 21.07.20) surveyor observations indicated that a bat may have emerged from Building 2, as one was seen early in the survey and bats were observed foraging from early on in the survey within Building 9. Therefore, these buildings were subject to further presence/ absence surveys. One survey was undertaken of Building 2 and no evidence of roosting bats was found. Two surveys were undertaken of Building 9, as the first was inconclusive. No evidence of roosting bats was identified within Building 9 and it was confirmed that the bats entered the building from the treeline to the east to forage.
- 4.54 No evidence of past or present use of Buildings (2-12) or Trees (1-6) by roosting bats was identified.
- 4.55 Following the bat presence/ absence surveys, one bat (considered to be a common pipistrelle) was observed re-entering Building 1 during the dawn survey on 19.08.2020. An additional survey was undertaken on 07.09.2020, however no further evidence of bat roosting was identified during this survey and no evidence of bat roosting was identified during the first survey on 20.07.2020. Therefore, it is considered that Building 1 contains a common pipistrelle day roost.
- 4.56 Overall, the presence/ absence surveys identified low numbers of common pipistrelle, soprano pipistrelle and noctule utilising the site for commuting and foraging.
- 4.57 Presence/ absence surveys were conducted during the optimal survey period for bats and were undertaken by suitably experienced surveyors in line with the BCT Guidance.
- 4.58 Habitats within the immediate and wider surrounds are considered to be of low value for foraging and commuting bats.

Summary and Evaluation (Barn owl)

- 4.59 The barn owl survey found Buildings 1, 2, 3, 4, 7, 9 and 12 to have no value to support barn owl.
- 4.60 Building 5 and Building 11 were found to be suitable for roosting barn owl with Building 11 being potentially suitable for breeding barn owl. No signs of use were noted in any of the buildings, although there were access constraints to areas of Building 11, specifically the

uppermost silo. No observations of barn owl were made during any of the bat presence/ absence or bat transect surveys undertaken at the site.

- 4.61 Foraging habitats surrounding the site were considered to be of low value to barn owls generally.
- 4.62 The trees on site and adjacent to the site offered no suitability to support barn owl and habitats on site and in the local area are of low value to barn owls generally.
- 4.63 Interpreting the results of the habitat assessment, the results indicate that the site is of value to barn owl, but the low foraging habitat value may be indicative of why the site has no signs of occupation.

5.0 Impacts and Recommendations

Bats

- 5.1 The results of the surveys at Chapel Lane have found the buildings on site to contain varying levels of potential to support roosting bats. Building 1 was found to contain moderate potential for bat species. Buildings 3, 4, 7, 8, 11 and 12 have been found contain low potential for bat species. Therefore, there may be implications with regard to bats and the proposed development and further presence/ absence surveys are required to establish if bats are using these buildings.
- 5.2 Buildings 2, 5, 6, 9 and 10 have been found contain negligible potential for bat species and no evidence of past or present use of the buildings by roosting bats was found during the survey. Therefore, there are no apparent implications in relation to these buildings and roosting bats.
- 5.3 Following the potential roosting feature survey, Trees 3 and 5 were reclassified as having **low** potential for roosting bats and in line with current BCT Guidelines, do not require further presence/ absence surveys. However, if affected by development, precautionary measures during felling should be adopted by arborists to ensure bats are not present. If bats are found to be present, then all works should stop immediately and a licenced bat consultant contacted for advice.
- 5.4 Tree 1 has retained **moderate** potential for roosting bats and it was not safe to undertake an aerial inspection of Tree group 4. There was no land access to Trees 2 and 6 at the time of the PRF inspection .
- 5.5 Following the PRA and PRF surveys in line with the guidance, Buildings 1, 3, 4, 7, 8, 11 and 12 and Trees 1, 2, 6 and Tree group 4 were subject to further presence/ absence surveys, to determine if they were being used by bats. As a result of surveyor observations made during the surveys of the above buildings, presence/ absence surveys of Buildings 2 and 9 were also undertaken. With the exception of Building 1, no bat roosting activity was observed during the presence/ absence surveys and the level of survey undertaken is considered sufficient to provide confidence in the absence of roosting bats.
- 5.6 Therefore, it is considered that bats are not roosting in Buildings 2-12 and there are no apparent implications with regards to roosting bats and the proposed works in the above buildings. Presence/ absence surveys of Trees 1, 2, 6 and Tree group 4, also suggested absence of roosting bats, however as best practice, it is recommended a further dawn

presence/ absence survey is undertaken immediately prior to any felling operations going forward.

- 5.7 Ideally, the trees on site should be retained *in situ* and not be affected by the proposed development. If removal of roosting features is necessary, then compensation for loss shall be required.
- 5.8 The presence/ absence surveys of Building 1 have found the presence of a **confirmed** bat roost used by small numbers of a common bat species. One individual was identified re-entering the building under the soffit box on the south eastern elevation. The individual was not echolocating and the species is unknown, although it is presumed to be common pipistrelle as no other species were identified during that survey. It is considered that building 1 is used by a small number of common species as a day roost over the summer period.
- 5.9 The development proposals for Building 1 are currently unknown and full details of the proposals will be required to allow a full review of the effect of the proposals upon the bat species found to be using the site. The review shall include ways in which impacts may be reduced and/ or determine how suitable mitigation or compensation can be incorporated within the design to reduce adverse impacts upon bat species found at the site.
- 5.10 As roosting bats have been confirmed within Building 1, in the absence of suitable mitigation/ compensation measures under the appropriate Natural England licence, if works are undertaken that impact a bat roost either directly or indirectly, then this would result in an offence being committed under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).
- 5.11 If the works require planning approval, the Local Planning Authority will require the results of the activity surveys and a suitable mitigation and enhancement scheme that demonstrates the continued favourable conservation status of bats found at the site in support of any Planning Application, in line with current Planning Policy.
- 5.12 Work at the site will be delayed until such a time that a Natural England Licence is applied for and granted to legally permit work to commence which would affect bats or their roosts.
- 5.13 A Natural England Licence can only be applied for once planning consent is gained. There may be delays in obtaining a Natural England Licence and time constraints as to when the mitigation can be undertaken.
- 5.14 A Section 106 agreement or similar legally binding covenant should be in place attached to any planning permission. Adequate roost provision should be agreed to ensure the favourable conservation status of bat species at the site.
- 5.15 Opportunities for roosting bats shall be incorporated as a general enhancement measure across the site in new buildings and retained trees.
- 5.16 Other enhancement measures for bats across the site could include planting of species-rich hedgerows on the boundaries of the proposed residential gardens, for foraging and commuting bats. A species-rich hedgerow could be planted on the northern side of the footpath to provide a hedged corridor which will act as a commuting and foraging corridor for bats and also as a buffer to the residential gardens from the public footpath. There will also be an 8m easement within the site along the watercourse which runs along the northern boundary of the site, which will allow a foraging corridor to be retained.

- 5.17 As bats are mobile creatures and can form new roosts at any time, if works are not started within one year of this report then it may be necessary to repeat certain surveys.
- 5.18 If at any time a bat/s or evidence of bat/s is/are suspected or found, all works must cease immediately and advice should be sought from either Natural England or the acting consultant ecologist.

Barn owl

- 5.19 Buildings 5, 8 and 11 were considered to have suitability to support barn owl. However, there are no records of barn owls locally post 1999 and there is no evidence of occupation past or present in any of the buildings and they had not been cleaned prior to the survey.
- 5.20 It is considered that, had habitats around the site and the wider survey area been suitable to support barn owl and reliable recruitment pathways been present, a nest box scheme would have been proposed. However, because it is highly unlikely that any boxes installed would be used, no further action is required at the site.
- 5.21 Consideration should be given to the purchase of two nest boxes for a local barn owl project to aid barn owl conservation.
- 5.22 In the very unlikely event that barn owl is seen or suspected at any time during the further required bat presence / absence surveys or prior to or during any future demolition activities, all works must cease immediately and the acting consultant notified for advice.

Other: Breeding Birds

- 5.23 The site also contains suitable breeding bird habitat including trees and buildings. A wren's nest was found in Building 9.
- 5.24 If suitable breeding bird habitat is affected during the breeding bird season, then an assessment by an Ecologist for breeding birds should be undertaken prior to works. If breeding birds are found, it is likely that works will have to be delayed until breeding has ceased.
- 5.25 It is good practice to remove all affected breeding bird habitat during the winter months prior to works starting to prevent delays.

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Figure 1:
Building and Tree Location Plan

Figure 1: Building and Tree Location Plan

Map Ref: (NGR) 35004, 38780
Map Scale: 1:2,700@ A3

Key;

-  Site boundary
-  Building
-  Tree
-  Group of buildings

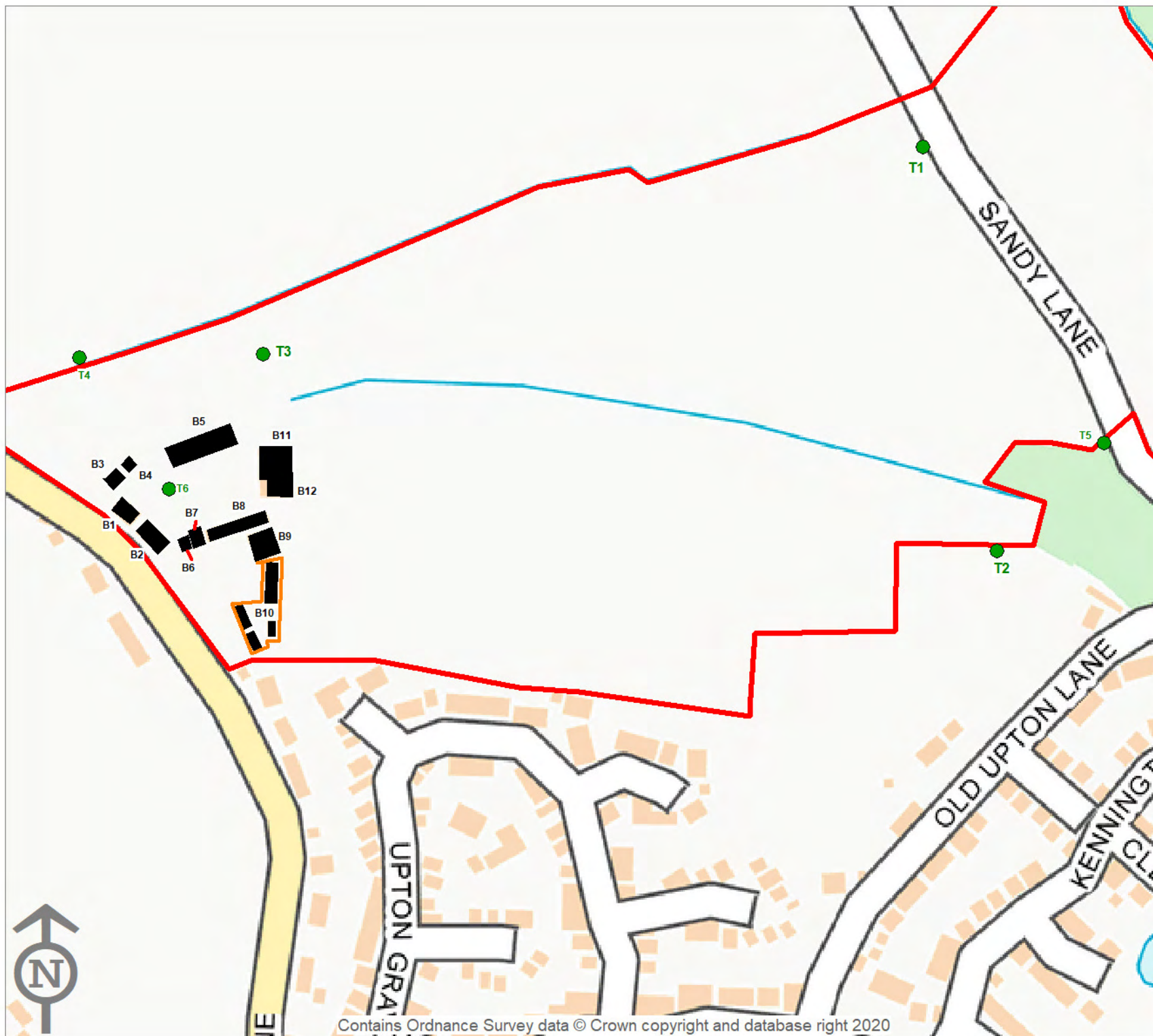


Figure 2
Presence/ Absence Survey Results and Surveyor Location Plan - Buildings 1, 3 and 4

Figure 2:
Presence/ Absence Survey Results
and Surveyor Location Plans

Map Ref: (NGR) 35004, 38780
Map Scale: 1:2,700@ A3

Key;

-  Surveyor Location
-  Bat Flight Paths 20.07.20
-  Bat Flight Paths 19.08.20
-  Bat Flight Paths 07.09.20
-  Roost Location

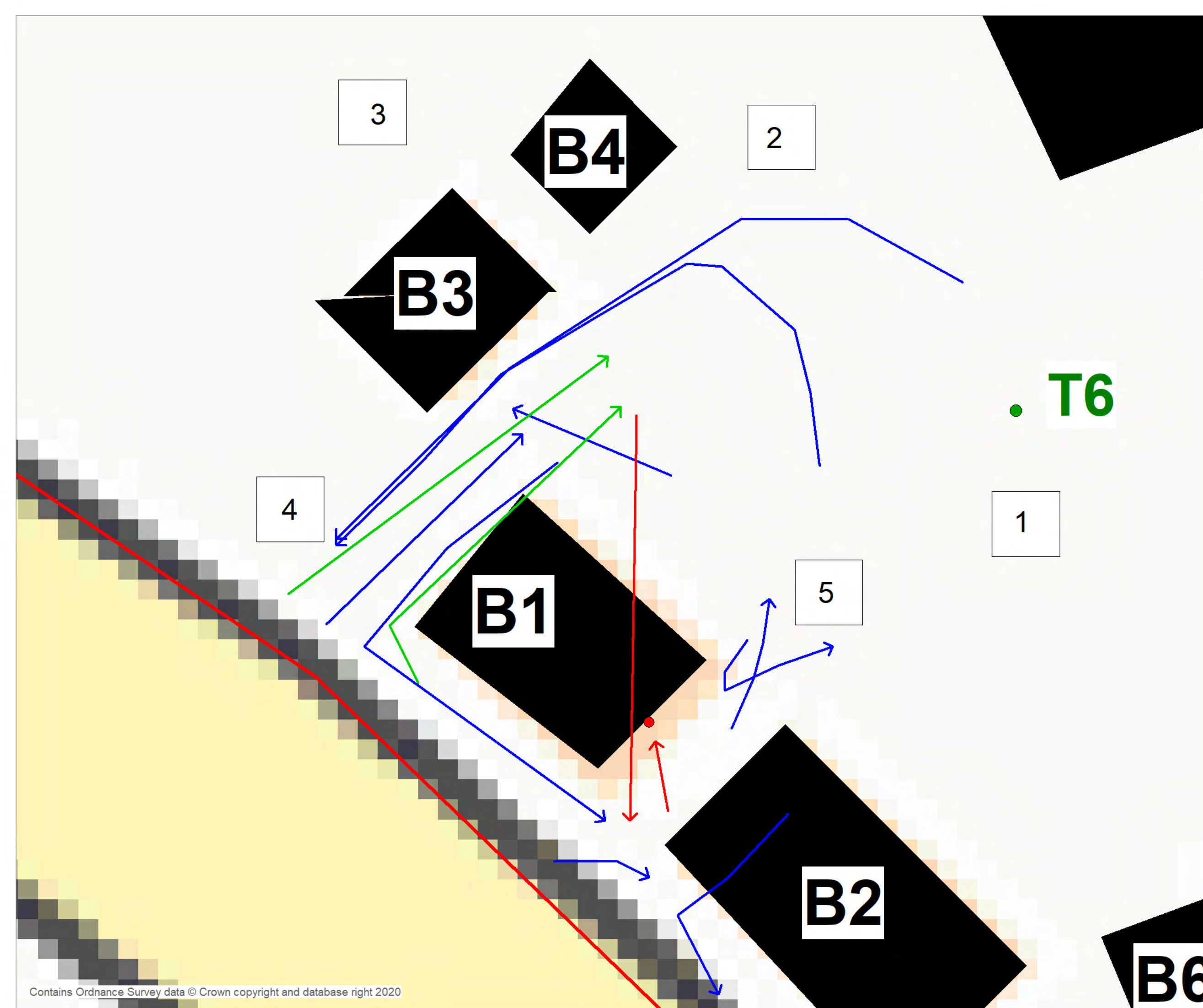


Figure 3
Presence/ Absence Survey Results and Surveyor Location Plan - Building 2

Figure 3:
Presence/ Absence Survey Results
and Surveyor Location Plans

Map Ref: (NGR) 35004, 38780
Map Scale: 1:175 @ A3

Key;

-  Surveyor Location
-  Bat Flight Paths 30.07.20

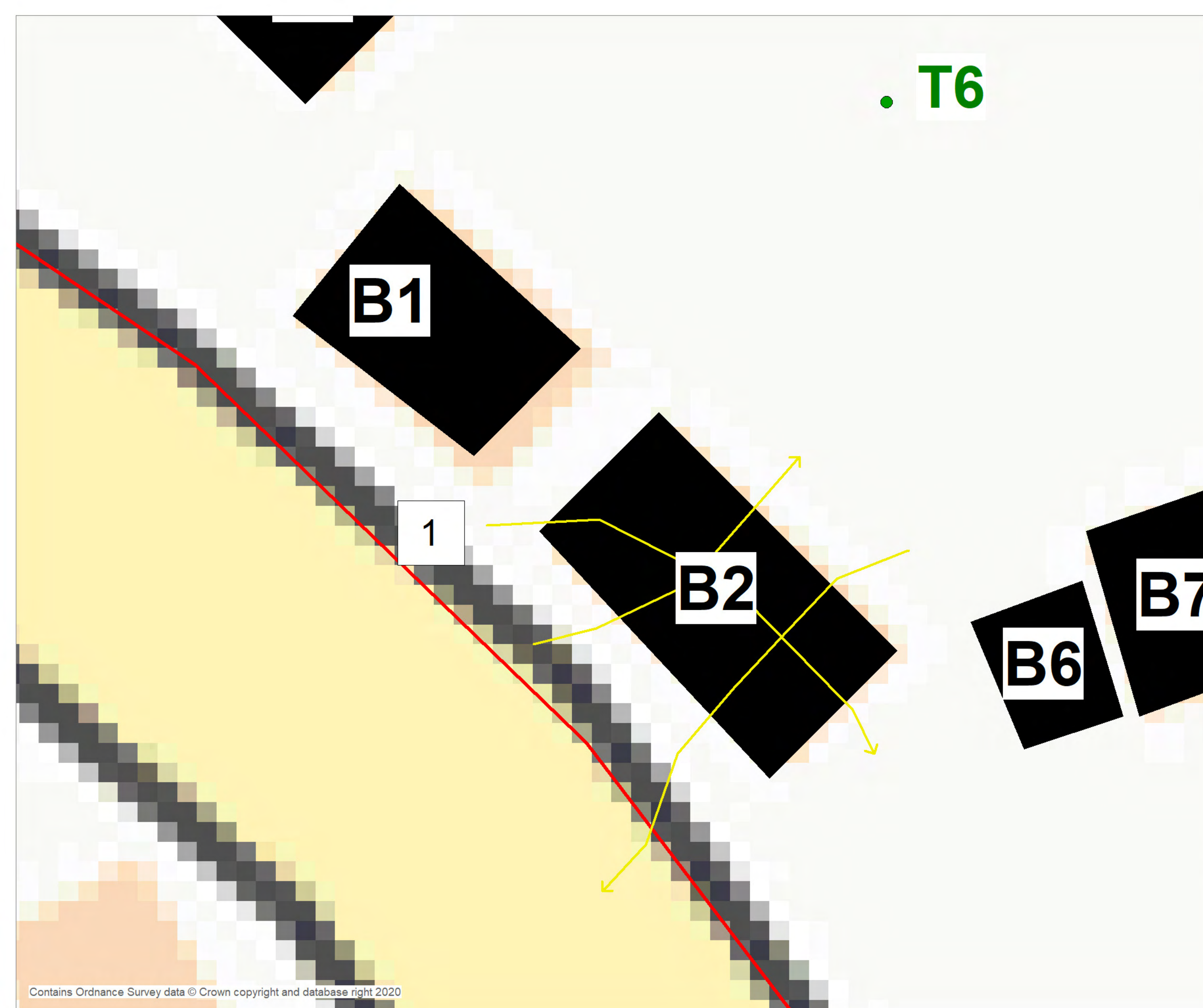


Figure 4
Presence/ Absence Survey Results and Surveyor Location Plan - Buildings 7 and 8

• **T6**

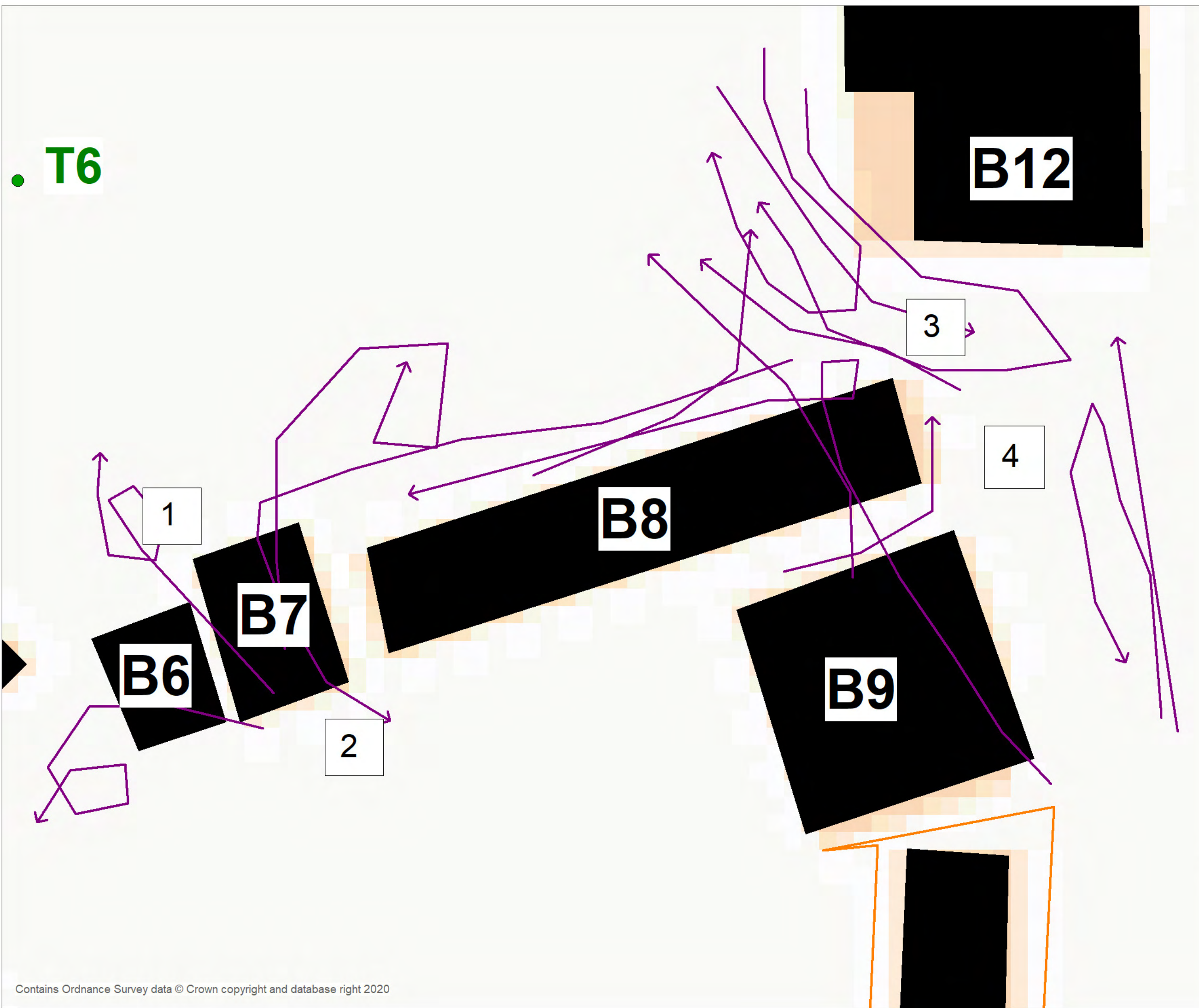


Figure 4:
Presence/ Absence Survey Results
and Surveyor Location Plans

Map Ref: (NGR) 35004, 38780
Map Scale: 1:200 @ A3

Key;

Surveyor Location

Bat Flight Paths 21.07.20



Figure 5
Presence/ Absence Survey Results and Surveyor Location Plan - Building 9

Figure 5:
Presence/ Absence Survey Results
and Surveyor Location Plans

Map Ref: (NGR) 35004, 38780
Map Scale: 1:200 @ A3

Key:

- Surveyor Location 30.07.20
- Surveyor Location 07.09.20
- 📷 Camera Location 30.07.20
- 📷 Camera Location 07.09.20
- ➔ Bat Flight Paths 30.07.20
- ➔ Bat Flight Paths 07.09.20

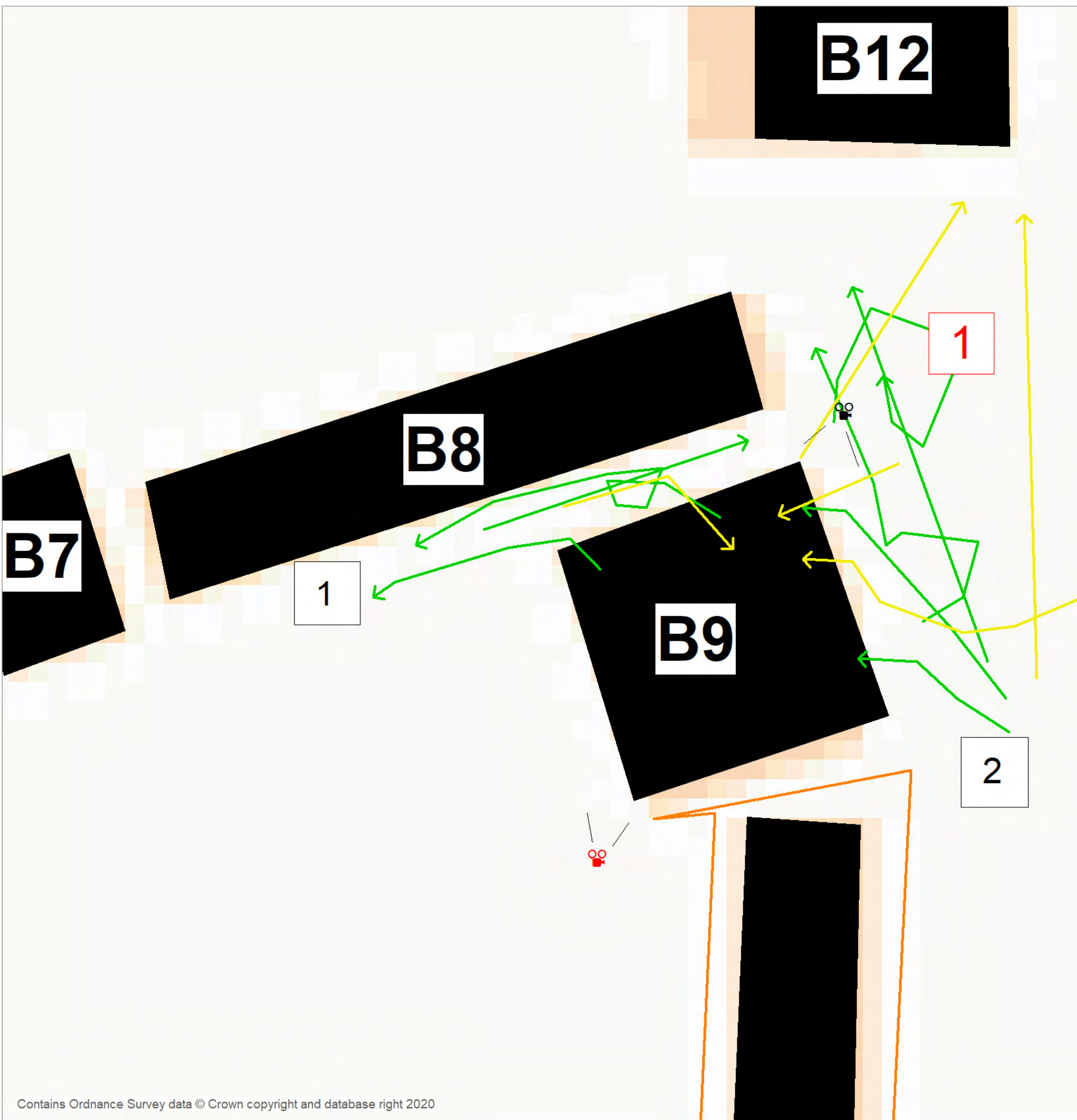


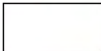
Figure 6

Presence/ Absence Survey Results and Surveyor Location Plan - Buildings 11 and 12

Figure 6:
Presence/ Absence Survey Results
and Surveyor Location Plans

Map Ref: (NGR) 35004, 38780
Map Scale: 1:200 @ A3

Key:

-  Surveyor Location
-  Bat Flight Paths 27.07.20

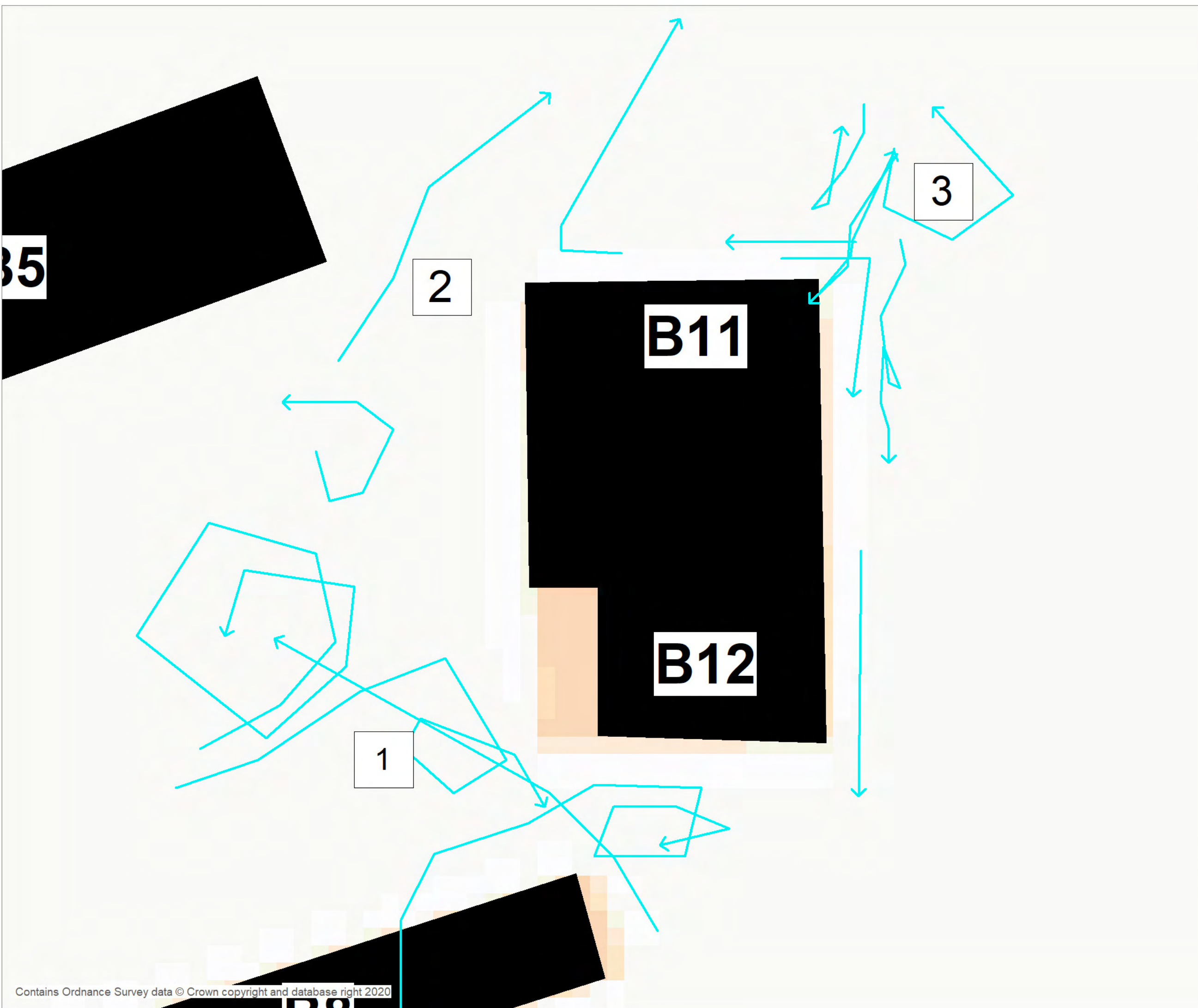


Figure 7
Presence/ Absence Survey Results and Surveyor Location Plan -Trees 1 and 2

Figure 7:
Presence/ Absence Survey Results
and Surveyor Location Plans

Map Ref: (NGR) 35004, 38780
Map Scale: 1:900 @ A3

Key:

-  Surveyor Location
-  Bat Flight Paths 22.07.20
-  Bat Flight Paths 01.09.20

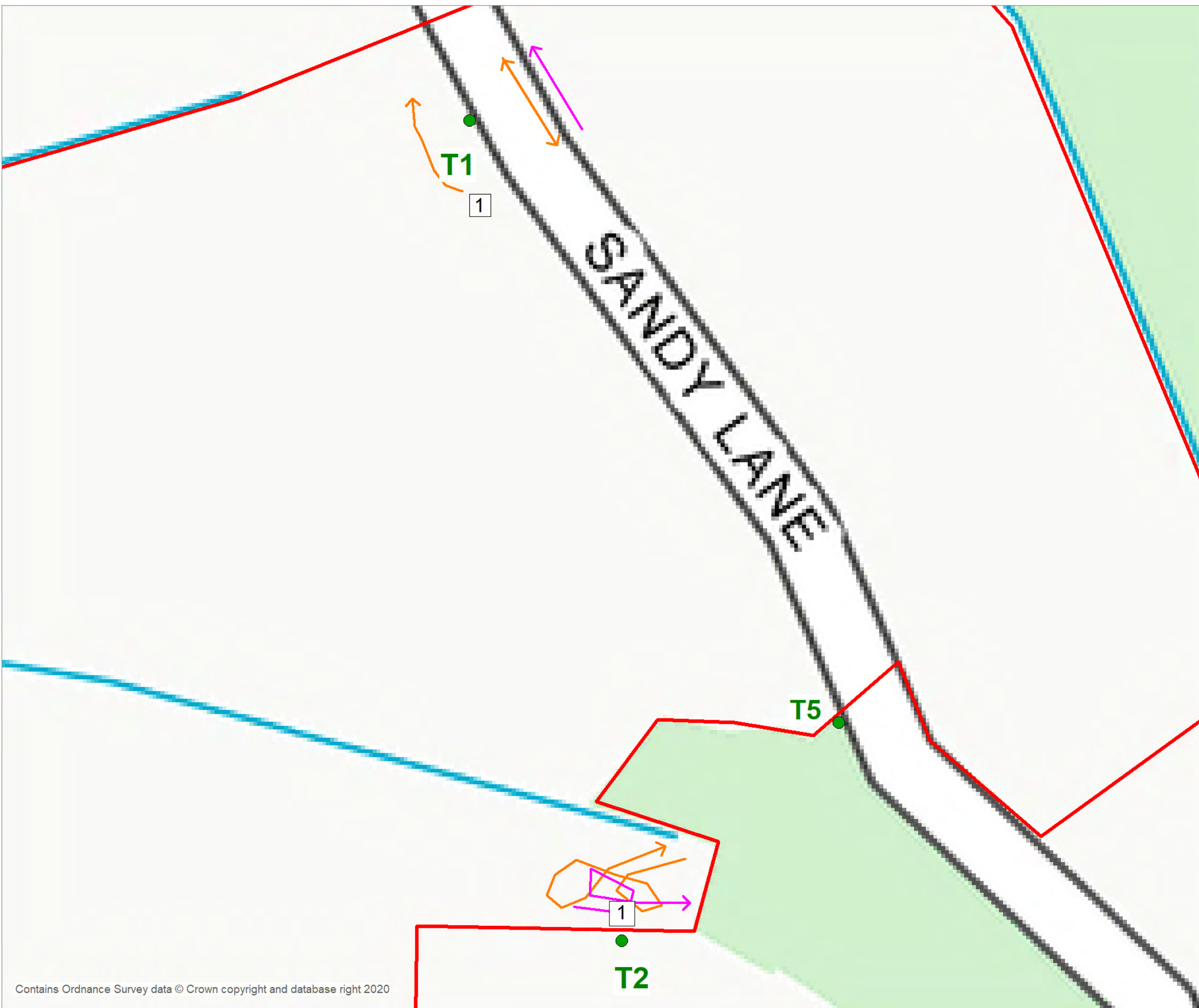


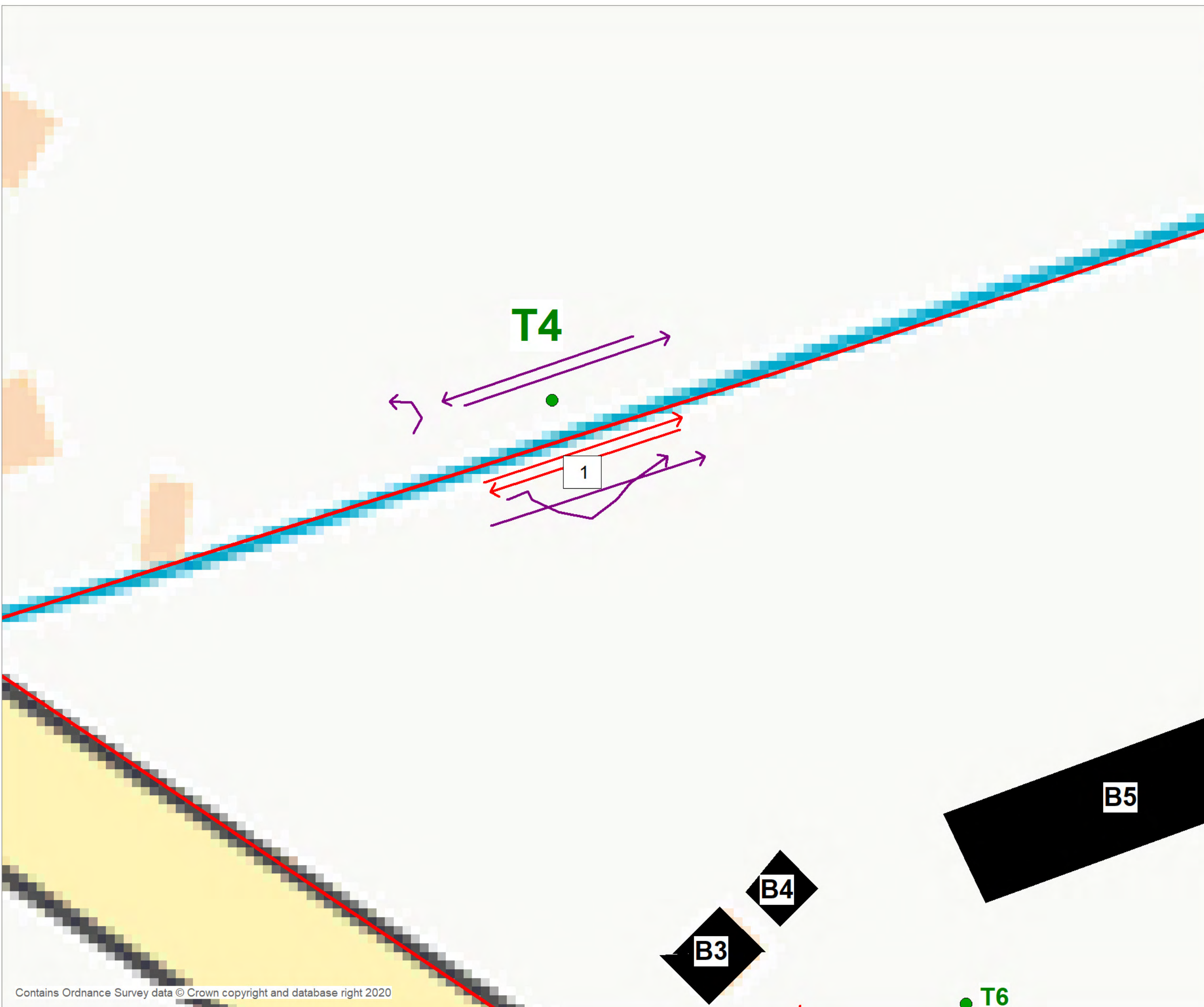
Figure 8
Presence/ Absence Survey Results and Surveyor Location Plan -Tree 4

Figure 8:
Presence/ Absence Survey Results
and Surveyor Location Plans

Map Ref: (NGR) 35004, 38780
Map Scale: 1:400 @ A3

Key:

-  Surveyor Location
-  Bat Flight Path 21.07.20
-  Bat Flight Path 19.08.20



Appendix 1: **Planning Policy and Legislation**

Disclaimer: Appendix 1 is a guide to legislation and procedure relating to biodiversity in England. It is general guidance and it does not give specific advice in relation to any site, species or project. It represents Ecology Services Ltd interpretation of legislation and procedure as at March 2019. Readers should note that legislation and procedure changes continually and is interpreted on a case-specific basis. Nothing in Appendix 1 should be construed as an offer of advice or legal opinion.

Planning Context

National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF, 2019) places a clear responsibility on Local Planning Authorities (LPA) to contribute to conserving and enhancing the natural and local environment. LPAs should promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species (e.g. Species of Principal importance, Biodiversity Action Plan species); and identify and pursue opportunities for securing measurable net gains for biodiversity. The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation.

A Local Planning Authority (LPA) has a duty to ensure that protected species and habitats within the UK are a 'material consideration' in the determination of a planning application. Therefore, an LPA is unlikely to determine an application until all relevant information relating to protected species or habitats is submitted to fully inform the application. Relevant information includes adequate surveys and, where required, mitigation strategies, which will need to be submitted in support of a planning application.

Statutory Protection Afforded UK Bats

The Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, also known as the Habitats Directive, lists all UK bat species on Annex IV which places an obligation on all member states to implement strict protection for these species. This legislation is transposed into UK law through the Conservation of Habitats & Species Regulations 2017 (as amended), which makes it an offence to:

- deliberately kill, injure or capture a wild bat;
- deliberately disturb* a bat;
- damage or destroy a breeding site or resting place of a bat.

*Disturbance, as defined by the Conservation of Habitats & Species Regulations 2017 (as amended), is that which is likely to:

- impair their ability –
 - to survive, to breed or reproduce, or to rear or nurture their young; or
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate.
- affect significantly the local distribution or abundance of the species to which they belong.

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 continue the same provision for European protected species, licensing requirements and protected areas after Brexit.

All UK bats and their roosts are afforded further protection through their inclusion on Schedule 5 of the Wildlife & Countryside Act 1981 (as amended), which makes it an offence to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection;
- intentionally or recklessly obstruct access to a structure or place which a bat uses for shelter or protection.

Four bat species (greater horseshoe, lesser horseshoe, Bechstein's and barbastelle) are listed under Annex II of the EC Habitats Directive which requires member states to designate sites of particularly high importance for the conservation of these species as Special Areas of Conservation (SAC) ('Natura 2000' sites).

When dealing with planning applications where a European Protected Species (EPS) (all UK bats) may be affected, a Local Authority is a 'competent authority' within the meaning of regulation 7 of the Conservation of Habitats & Species Regulations 2017 (as amended). The local authority must therefore exercise their functions under the provisions made within the 2017 Regulations, and planning decisions should only be made when European Protected Species and their habitats are fully taken into account.

Licensing of Works Affecting Roosting Bats

Where a bat roost is likely to be affected by development then a licence to derogate from the legal protection would be required. Licence applications are processed and issued by Natural England and can only be applied for once planning permission (if required) has been granted.

Natural England may grant a licence for the purposes specified in paragraph 55 of the Regulations. The purposes are:

- 55(2)(e) preserving public health or safety or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment.
- 55(2)(f) preventing the spread of disease.

Natural England must not grant a licence under paragraph 55 unless it is satisfied that:

- 55(9)(a) there is no satisfactory alternative; and
- 55(9)(b) the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable status in their natural range.

In December 2016, Natural England introduced four policies for European Protected Species licensing. The policies seek to achieve better outcomes for EPS and reduce unnecessary costs, delays and uncertainty that were inherent in the current system. In brief, the four policies are:

- **Policy 1** - Greater flexibility when excluding and relocating European Protected Species (EPS) from development sites;
- **Policy 2** - Greater flexibility in the location of newly created habitats that compensate for habitats that will be lost;
- **Policy 3** - Allowing EPS to have access to temporary habitats that will be developed at a later date; and
- **Policy 4** - Appropriate and relevant surveys where the impacts of development can be confidently predicted.

Policy 1 allows compensation for EPS impacts to be delivered without the need to relocate or exclude populations where: exclusion or relocation measures are not necessary to maintain the conservation status of the local population; the avoid-mitigate-compensate hierarchy is followed; and

compensation provides greater benefits to the local population than would exclusion and/or relocation.

Policy 2 allows for the provision of off-site compensation measures where the licensing tests are met, the avoid-mitigate-compensate hierarchy is followed, there are good reasons for maximising development on the site of EPS impacts and where an off-site solution provides greater benefit to the local population than an on-site solution.

Policy 3 relates to developments, such as mineral extraction, which temporarily create habitat which is likely to attract EPS and enables works to proceed without the exclusion of EPS where the conservation status of the local population would not be detrimentally affected. On completion of development such sites must contribute to the conservation status of the local population as much as or more than the land use which preceded development. The measures to achieve this should be set out in a management plan and secured by a legal agreement.

Under **Policy 4** Natural England may accept a lower than standard survey effort where: the costs or delays associated with carrying out standard survey requirements would be disproportionate to the additional certainty that it would bring; the ecological impacts of development can be predicted with sufficient certainty; and mitigation or compensation will ensure that the licensed activity does not detrimentally affect the conservation status of the local population of any EPS.

Natural Environmental and Rural Communities (NERC) Act 2006

Section 40 of the Natural Environmental and Rural Communities (NERC) Act 2006 places a statutory duty on public authorities, in exercising their functions, to conserve biodiversity in England. Species of Principal Importance for the conservation of biodiversity in England, as identified by the Secretary of State in consultation with Natural England, are listed Section 41 of the NERC Act. The Local Planning Authority and government bodies (e.g. Natural England) will expect the overall design of the development to have regard for the conservation of these species. Section 41 of the NERC Act lists seven bat species as Species of Principal Importance (refer to Section 2).

Appendix 2:

Guidelines for Assessing Habitat Suitability for Bats

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats based on the presence of habitat features within the landscape, to be applied using professional judgement (Taken from the Bat Conservation Trust Bat Surveys for Professional Ecologists: Good Practice Guidelines, 2016).

Suitability	Description	
	Roosting habitats	Commuting & foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions¹ and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation²). A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential³.	Habitat that could be used by small numbers of commuting bats such as gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitats. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) of a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ¹ and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back to gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland and water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ¹ and surrounding habitat.	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broad-leaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
¹For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance. ²Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten <i>et al.</i>, 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments. ³This system of categorisation aligns with BS8596:2015 Surveying for bats in trees and woodland (BSI, 2015).		

Appendix 3:**Recommended Timings and Survey Effort for Presence/ Absence Surveys**

Tables 7.1 & 7.3. Recommended timings and minimum number of survey visits for presence/ absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability	Moderate roost suitability	High roost suitability
<u>Structures</u> One survey visit - one dusk emergence or dawn re-entry survey ¹ . Timing - May to August.	<u>Structures & Trees</u> Two separate survey visits - one dusk emergence and a separate dawn re-entry survey ² . Timing - May to September ³ with at least one of surveys between May and August ² .	<u>Structures & Trees</u> Three separate survey visits - at least one dusk emergence and a separate dawn re-entry survey. The third visit could be either a dusk or dawn ² . Timing - May to September with at least two of surveys between May to August ² .
<u>Trees</u> No further surveys required. Precautionary approach to felling.		
¹Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis. If there is a possibility that quiet calling, late-emerging species may be present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category. ²Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more, unless there are specific ecological reasons for the surveys to be closer together (for example, a more accurate count of maternity colony is required but it is likely that the colony will soon disperse). If there is potential for a maternity colony then consideration should be given to detectability. A survey on the 31st August followed by a mid-September survey is unlikely to pick up a maternity colony. An ecologist should use their professional judgement to design the most appropriate survey regime. A dawn survey immediately after a dusk one is considered only one visit. ³September surveys are both weather and location dependant. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season.		

Appendix 4:

Population Statuses of Bat Species in North Merseyside and Cheshire

National Status

There are 18 species of bat that are native to the United Kingdom.

The latest Review of the Conservation Status of British Mammals (2018) has shown that where change could be assessed with reasonable confidence there have been increases in the geographical range and population status of two species of UK bat (greater and lesser horseshoe bat) and decrease in the geographical range of one species (grey long-eared bat). Increases in population were also identified in the following species: Bechstein's, Daubenton's, Natterers, Serotine and brown long-eared although it is noted that the reliability of the results is poor. Population data was not available for; Alcaho, whiskered, Brandts, Leisler's, noctule, Barbastelle and Nathusius pipistrelle.

Population estimates were given for common and soprano pipistrelle however they could not be reliably compared to the results from Harris et al. (1995) as the two species had not been identified as separate species at the time of that survey. *Pipistrellus* spp. remain the commonest species of bat in the UK despite their decline.

The State of Bats 2017 report produced by the Bat Conservation Trust used results from multiple survey types (hibernation, roost, waterway and field) of the National Bat Monitoring Programme (NBMP) to compile population trends between 1999, 2001 or 2002 to 2016. The report identified statistically significant (95% accuracy) population increase in Great Britain in the following species; greater horseshoe (hibernation and roost surveys), lesser horseshoe (hibernation and roost surveys), Daubenton's (hibernation surveys), Natterers (hibernation surveys), common pipistrelle (field surveys), soprano pipistrelle (field surveys). Significant decreases in population in Great Britain were identified in common pipistrelle (roost surveys), soprano pipistrelle (roost surveys) and brown long-eared (roost surveys).

These trends reflect relatively recent changes to bat populations since the 1990s. It is generally considered that prior to this there were significant historical declines in bat populations dating back to at least the start of the 20th century, although evidence is fragmented and few data were collected in a systematic way.

Serotine and barbastelle are considered vulnerable and Leisler's and Nathusius' pipistrelle, near threatened in Britain and England in the Red List for Britain's Terrestrial Mammals (Mathews and Harrower, 2020).

North Merseyside

Local Status

Eight bat species are listed as being resident in North Merseyside; these are as follows:

- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano pipistrelle (*Pipistrellus pygmaeus*)
- Brown long-eared (*Plecotus auritus*)
- Whiskered (*Myotis mystacinus*)
- Brandt's (*Myotis brandtii*)
- Natterer's (*Myotis nattereri*)
- Daubenton's (*Myotis daubentonii*)
- Noctule (*Nyctalus noctula*)

Nine native species of bat have been recorded in North Merseyside, which include the above list with the addition of Nathusius pipistrelle (*Pipistrellus nathusii*) which have been trapped and ringed at Knowsley Safari Park and identified on bat detectors in some Liverpool parks including Newsham Park. In addition to this, an individual record of the non-native Savi's Pipistrelle (*Pipistrellus savii*) was recorded which is thought to have arrived in the UK on a ship bound for Liverpool.

Populations of bats in many parts of North Merseyside are comparable in size and importance to some of the best areas in the country and the size and changes are believed to mirror national trends.

Pipistrelle bats occur in all four of the Merseyside districts and are widely distributed in North Merseyside, being the most encountered bats roosting within built structures and foraging in urban areas.

Brown long-eared and noctule are found throughout North Merseyside but are less common.

The distribution of Daubenton's, which feed predominately over water, are localised with records from Sefton, Liverpool and St Helens.

Whiskered/Brandt's and Natterer's are rare locally, with whiskered being recorded in Sefton and St. Helens and Natterer's only recorded in St. Helens so far.

Swarming activity has only been identified in one area in North Merseyside; Rainford of up to seven species (four species of *Myotis*, *Pipistrellus pipistrellus*, *Pipistrellus pygmaeus* and *Plecotus auritus*) (White (Ed.) *et. al.*, 2017).

Cheshire

Local Status

There are ten bat species listed as being resident in Cheshire; these are as follows:

- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano pipistrelle (*Pipistrellus pygmaeus*)
- Noctule (*Nyctalus noctula*)
- Leisler's (*Nyctalus leisleri*)
- Serotine (*Eptesicus serotinus*) – although these records are yet to be confirmed.
- Whiskered (*Myotis mystacinus*)
- Brandt's (*Myotis brandtii*)
- Daubenton's (*Myotis daubentonii*)
- Natterer's (*Myotis nattereri*)
- Brown long-eared (*Plecotus auritus*)

Twelve species of bat have been recorded in Cheshire, which include the above list, with the addition of the more recent discovery of Lesser Horseshoe (*Rhinolophus hipposideros*) and Nathusius Pipistrelle (*Pipistrellus nathusii*).

Populations of bats in many parts of Cheshire are comparable in size and importance to some of the best areas in the country and the size and changes are believed to mirror national trends.

Common and soprano pipistrelle are the most commonly widespread species found within the Cheshire districts and are widely distributed throughout Cheshire, being the most commonly

encountered bats roosting within built structures and foraging in urban areas. Nathusius' pipistrelle has only to date been recorded at one site within Cheshire.

Brandt's and whiskered are difficult to distinguish and little is known about their distribution within Cheshire.

Noctule bats are the largest bat found in Cheshire and Leisler's are similar in appearance and may as a result be under recorded within the county.

The most recent discovery is of two lesser horseshoe bats recorded hibernating during a survey of man-made caves in the south of the county in 2009. Previous records for this species date back to 1948.

Appendix 5:
Site Photographs



Eastern elevation of Building 1



Western elevation of Building 2



Roost location on the south eastern elevation of Building 1.



South western elevation of Building 3



South eastern elevation of Building 4



Building 5



Northern elevation of Building 6



The northern and western elevations of Building 7



Northern elevation of Building 8



Eastern elevation of Building 9



Building 10



North western elevation of Building 11



Northern elevation of Building 11.



South western elevation of Building 11



The western elevation of Building 12.



Tree 1



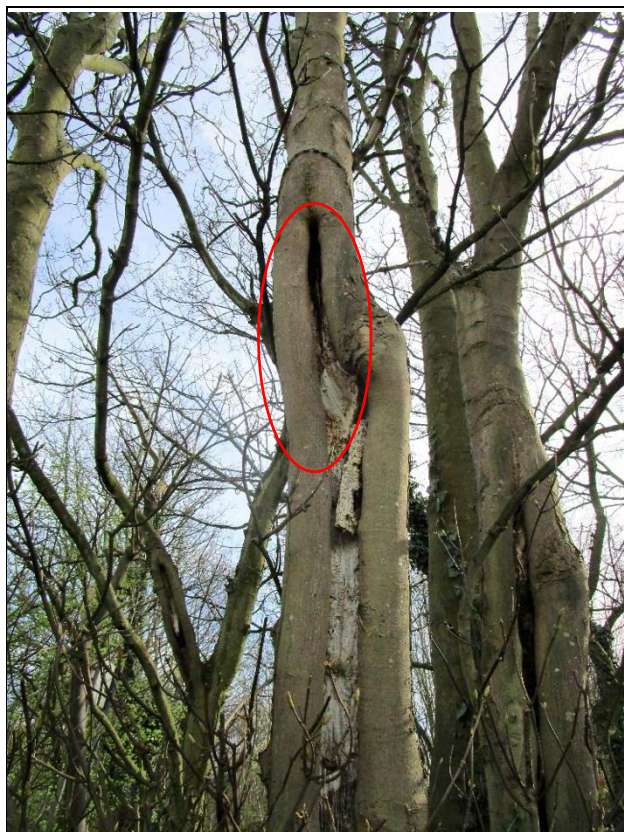
Tree 2



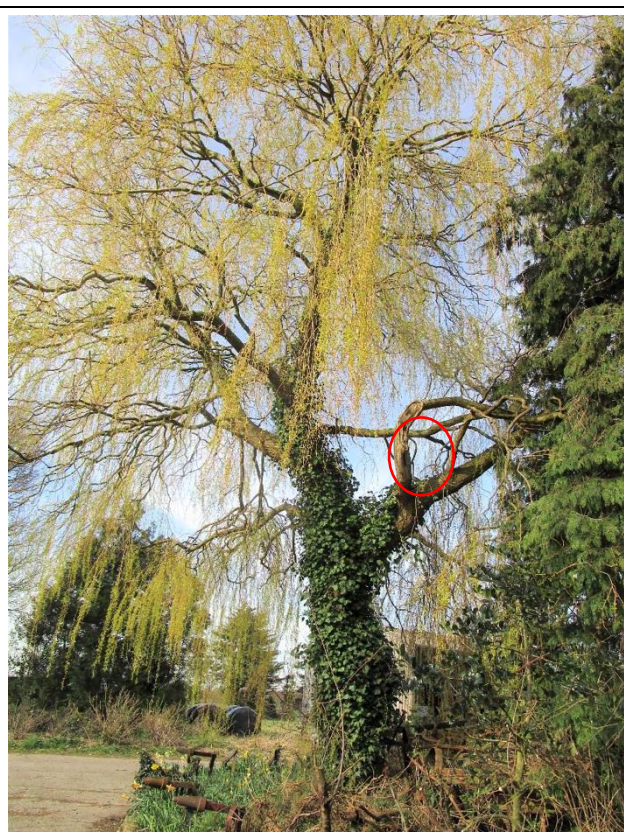
Tree 3



Tree 4



Tree 5



Tree 6

Appendix 6: Raw Survey Data

Date of survey & survey type	Start & end times	Species & numbers	Roost type	Roost Location	Access points (include # of them)	Dimension of existing roosts or location
20.07.20 Dusk (Buildings 1, 3, 4 & Tree 6)	Start: 20:54 End: 22:54	No roosting bats were observed	N/A	N/A	N/A	N/A
Notes/observations: Common pipistrelle (<i>Pipistrellus pipistrellus</i>) and occasional soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) activity: commuting, foraging and feeding activity was identified around Buildings 1, 3, 4 and Tree 6, from the road into the site and along the treeline adjacent to Buildings 3 and 4.						
21.07.20 Dusk (Buildings 7, 8 and Tree group 4)	Start: 20:53 End: 22:53	No roosting bats were observed	N/A	N/A	N/A	N/A
Notes/observations: Common pipistrelle and occasional noctule (<i>Nyctalus noctula</i>) activity: commuting, foraging and feeding activity was identified around Buildings 7, 8 and Tree group 4. Activity was also located along the tree line on the northern boundary of the site adjacent to Tree group 4 and along the tree line to the east of Building 8.						
22.07.20 Dusk (Trees 1 & 2)	Start: 20:52 End: 22:52	No roosting bats were observed	N/A	N/A	N/A	N/A
Notes/observations: Common pipistrelle activity: commuting, foraging and feeding activity was identified around Trees 1 and 2 mainly located in the woodland and along the hedgerow on Sandy Lane to the east of the trees.						
27.07.20 Dusk (Buildings 11 & 12)	Start: 20:44 End: 22:44	No roosting bats were observed	N/A	N/A	N/A	N/A
Notes/observations: Common pipistrelle activity: commuting, foraging and feeding activity was identified around Buildings 11 and 12, mainly located between Buildings 8 and 12 and along the tree line to the east of Buildings 11 and 12.						
30.07.20 Dusk (Buildings 2 & 9)	Start: 20:39 End: 22:39	No roosting bats were observed	N/A	N/A	N/A	N/A
Notes/observations: Common pipistrelle and noctule activity: commuting, foraging and feeding activity was identified around Buildings 2 and 9, mainly located along the tree line to the east of Building 9 and foraging within the building. Occasional passes were seen to and from the road over Building 2 and towards the farm yard.						
19.08.20 Dawn (Building 1, Tree 6 & Tree group 4)	Start: 03:59 End: 06:14	1x (probable) common pipistrelle re-entered.	Day roost	South eastern elevation of Building 1	#1 Re-entry under the soffit box, where there is a crack.	Exact dimensions unknown.

Notes/observations: Common pipistrelle activity: commuting, foraging and feeding activity was identified around Building 1, Tree 6 and Tree group 4 mainly located along the tree line on the northern boundary of the site adjacent to Tree group 4. Activity was also located passing over Building 1 to and from the road.						
01.09.20 Dawn (Trees 1 & 2)	Start: 04:21 End: 06:36	No roosting bats were observed	N/A	N/A	N/A	N/A
Notes/observations: Low amount of common pipistrelle activity: commuting, foraging and feeding activity was identified around Trees 1 and 2, mainly located along the hedgerow on Sandy Lane to the east of the trees.						
07.09.20 Dusk (Buildings 1 & 9)	Start: 19.15 End: 21:15	No roosting bats were observed	N/A	N/A	N/A	N/A
Notes/observations: Common pipistrelle activity: commuting, foraging and feeding activity was identified around Buildings 1 and 9, mainly located within Building 9, along the tree line to the east and between Buildings 8 and 9. Activity was also located around the northern elevation of Building 1 with passes to and from the road.						