

Appendix 11.7: Bat Roost Technical Appendix



THE
ENVIRONMENT
PARTNERSHIP



LAND NORTH OF BRYN LANE WREXHAM BAT ROOST SURVEY REPORT

TEP
Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

Tel: 01925 844004
Email: tep@tep.uk.com
www.tep.uk.com

Offices in Warrington, Market Harborough, Gateshead, London and Cornwall

Document Title	Bat Roost Survey Report
Prepared for	Net World Sports
Prepared by	TEP - Warrington
Document Ref	9134.005

Author	Alex Fitzroy
Date	April 2022
Checked	Steph Davies
Approved	John Crowder

Amendment History					
Version	Date	Modified by	Check / Approved by	Reason(s) issue	Status
2.0	Nov 22	EH	JC	Updated following aerial and nocturnal survey	Issued
3.0	April 23	PP	AE	Updated following amendments to the redline boundary and proposed development	Issued
4.0	June 23	PP	AE	Updated following CBRE comments.	Issued

CONTENTS	PAGE
Executive Summary	1
1.0 Introduction	3
2.0 Methods	7
3.0 Results	12
4.0 Conclusions.....	76

TABLES	PAGE
Table 1: Categorisation of buildings for bat roost suitability	7
Table 2: Weather Conditions During Roost Surveys 2022.....	9
Table 3: Categorisation of trees for bat roost suitability	10
Table 4: Preliminary Roost Assessment of Buildings for suitability to support roosting bats	13
Table 5: Results of ground level assessments	19
Table 6: Summary of GLTA.....	74
Table 7: Summary of Aerial Assessments.....	75
Table 8: Summary of GLTA and Aerial Assessments.....	76

FIGURES	PAGE
Figure 1: Site location within the context of the wider landscape.	4

APPENDICIES

Appendix A: Aerial Assessment Results 2022

DRAWINGS

Bat Ground Level Tree Assessment Results G9134.015.1-4A

Phase 1 Habitat Map G9134.007B

Building Location and Suitability Map G9134.031A

Surveyor Locations for Nocturnal Roost Surveys G9134.032A

Executive Summary

1. TEP was commissioned by Net World Sports in October 2021 to undertake a preliminary bat roost assessment of buildings and ground-based tree assessment at Land North of Bryn Lane, Wrexham (hereby referred to as "the site"). Ecological surveys are required to support an Environmental Statement that will inform proposals for a commercial development.

2. The proposed development is commercial in nature and encompasses:

Detailed Component:

- *Demolition of existing buildings, site clearance and preparation works, including removal of vegetation and reprofiling of topsoil, where necessary;*
- *Construction of a new warehouse unit, providing 33,595 sqm Gross External Area (GEA) for B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses (Unit 2);*
- *Construction of 8 new smaller units (Units 3-7; 14-16), providing a total of 29,659 sqm GEA for B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses;*

Outline Component:

- *Construction of up to 72,635 sqm GEA for employment uses (B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses), ancillary retail/drive thru facilities and potential for a hotel and petrol filling station (A1, A3, C1 or sui generis). The overall quantum of A1, A3, C1 or sui generis use would not exceed 16,150 sqm GEA;*
- *The proposed buildings will be up to 28.5m in height above ground level;*

Site Wide

- *Access and parking provision, including new access junctions, internal roads, service yards and car and HGV parking. Two new junctions are proposed (in detail) providing vehicular access, as well as cycle and pedestrian access, from Bryn Lane/Industrial Estate Road with an additional access road for a substation. Car parking spaces, HGV trailer spaces and HGV lorry spaces are proposed across the application site;*
- *Retention and enhancement of some existing on-site green spaces and provision of landscaping around the application site; and*
- *Implementation of drainage/attenuation measures.*

3. During the daytime preliminary roost assessment of buildings, two buildings within the site were assessed as having moderate suitability for roosting bats (B1 and B8) and four buildings were assessed as having low suitability for roosting bats (B3, B6, B7 and B13).
4. Nocturnal surveys were undertaken on these buildings which found that no roosts were present. Demolition of the buildings should be undertaken in winter (November to March), when bats are least likely to be present (as the structures are unsuitable

- for hibernation roosts). If demolition is proposed outside of this period, then the implementation of Precautionary Working Method Statement (PWMS) will be required and there may be implications for nesting birds within the buildings as well.
5. During the daytime preliminary roost assessment of trees and following the aerial assessments, 16 trees were assessed as having high suitability, 33 trees as having moderate suitability and 28 trees as having low suitability for roosting bats.
 6. Trees with high and moderate suitability that will be unavoidably impacted by the proposed development will require additional survey between May - September to establish bat roost presence or absence prior to removal.
 7. Any tree with low suitability that will be unavoidably impacted by development proposals will be subject to Precautionary Working Measures (PWMS) during removal or pruning works.
 8. A Sensitive Lighting Design should be implemented as part of the scheme to avoid indirect impacts of lighting on the commuting and foraging bat population. Mitigation measures include downward directional bollard lighting to retain dark tree canopies, motion censored lighting, illuminance limits (5 lux), recessed internal lighting, glazing treatments and soft landscaping to reduce horizontal spread. An appropriate lighting scheme will be secured by way of an appropriately worded planning condition.
 9. Bat boxes should be included within the development to further opportunities on the site for roosting bats. These can be installed within new buildings or on mature retained trees around the site. The locations and specification of proposed bat boxes can be secured by way of an appropriately worded planning condition.
 10. The hedgerows on the site proved to be the habitats of most value for commuting and foraging bats. The impacts of the proposed development and proposed mitigation are assessed in the accompanying ES Chapter (TEP Report Ref: 9134.011).

1.0 Introduction

- 1.1 TEP was commissioned in October 2021 by Net World Sports to undertake a preliminary bat roost assessment of buildings and ground-based tree assessment at Land North of Bryn Lane, Wrexham (hereby referred to as "the site"). Ecological surveys are required to support an Environmental Statement that will inform proposals for a commercial development. The proposed development is commercial in nature and encompasses:

Detailed Component:

- *Demolition of existing buildings, site clearance and preparation works, including removal of vegetation and reprofiling of topsoil, where necessary;*
- *Construction of a new warehouse unit, providing 33,595 sqm Gross External Area (GEA) for B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses (Unit 2);*
- *Construction of 8 new smaller units (Units 3-7; 14-16), providing a total of 29,659 sqm GEA for B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses;*

Outline Component:

- *Construction of up to 72,635 sqm GEA for employment uses (B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses), ancillary retail/drive thru facilities and potential for a hotel and petrol filling station (A1, A3, C1 or sui generis). The overall quantum of A1, A3, C1 or sui generis use would not exceed 16,150 sqm GEA;*
- *The proposed buildings will be up to 28.5m in height above ground level;*

Site Wide

- *Access and parking provision, including new access junctions, internal roads, service yards and car and HGV parking. Two new junctions are proposed (in detail) providing vehicular access, as well as cycle and pedestrian access, from Bryn Lane/Industrial Estate Road with an additional access road for a substation. Car parking spaces, HGV trailer spaces and HGV lorry spaces are proposed across the application site;*
- *Retention and enhancement of some existing on-site green spaces and provision of landscaping around the application site; and*
- *Implementation of drainage/attenuation measures.*

Site Description

- 1.2 The site (central grid reference SJ 38614 51101) is approximately 37.21 ha in size and is located to the east of Wrexham in North Wales.

- 1.3 The site is bounded to the south by Bryn Lane and Wrexham Industrial Estate, to the north by Francis Lane, to the west by both Industrial Estate Road and Hugmore Lane (with associated residential properties), and to the east by open agricultural fields. The wider area predominantly comprises urban development to the west associated with Wrexham town centre, with open countryside present to the north and east and the industrial estate to the south.
- 1.4 The extent of the area covered by the ecological assessment is represented by the red line boundary in the site location plan (Figure 1).

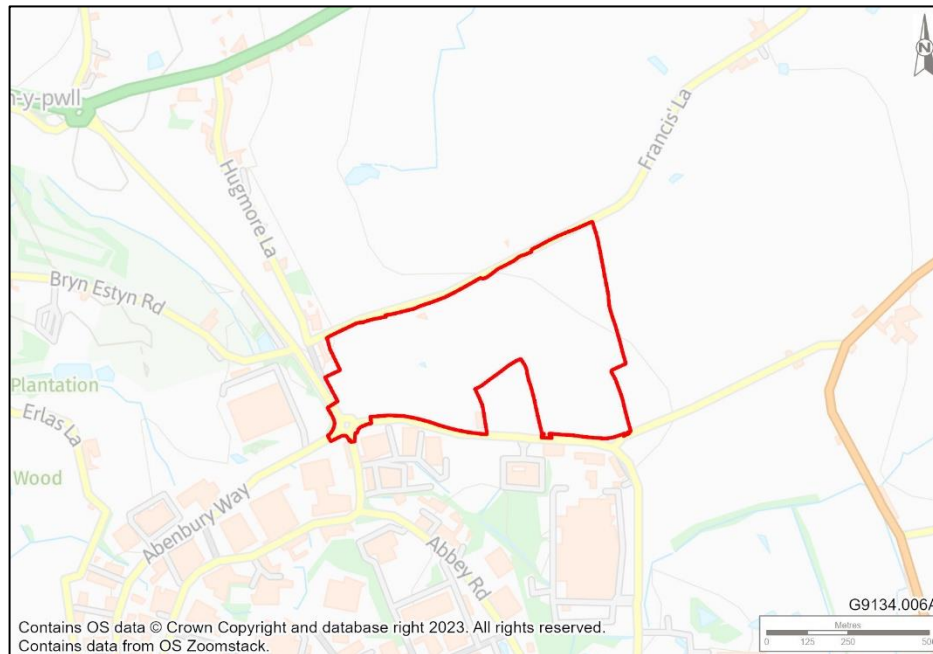


Figure 1: Site location within the context of the wider landscape.

Legislation

- 1.5 Bat species and their roost habitat are afforded full protection by the following legislation:

Conservation of Habitats and Species Regulations 2017, as amended by the Conservation of Habitats and Species (Amendments) (EU Exit) Regulations 2019

- 1.6 Species listed under Schedule 2 of the Conservation Regulations 2017¹, referred to as 'European Protected Species' (EPS), including their breeding sites and resting places, are protected under Regulations 42 and 43. This makes it illegal to:
- Deliberately capture, injure or kill any such animal;
 - Deliberately disturb such an animal;
 - Deliberately take or destroy the eggs of such an animal; and
 - Damage or destroy a breeding site or resting place of such an animal.

¹ Conservation of Habitats and Species Regulations 2017 (as amended). SI 2017/1012. London: HMSO and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 No. 579.

- 1.7 Under Regulation 55 of the Conservation Regulations 2017 (as amended), licences can be granted by Natural Resources Wales in respect of development to permit activities that would otherwise be unlawful, providing that the following 'three tests' are passed, namely:
- The development is for reasons of overriding public interest (or other purpose prescribed by Regulation 55(2));
 - There is no satisfactory alternative (Regulation 55(9)(a)); and
 - The action authorised will not be detrimental to the maintenance of the population of the site concerned at a favourable conservation status in their natural range (Regulation 55(9)(b)).
- 1.8 Under Regulation 9(1) of the Conservation Regulations 2017 (as amended), competent authorities '*must exercise their functions which are relevant to nature conservation... so as to secure compliance with the requirements of the Directives*'. Regulation 9(3) requires a competent authority, in exercising any of its function, to '*have regard to the requirements of the Directives so far as they be affected by the exercise of those functions*.' Local planning authorities must therefore consider the above three 'tests' when determining if planning permission should be granted for developments likely to cause an offence under the Conservation Regulations.

Wildlife and Countryside Act 1981 (as amended)

- 1.9 The Wildlife and Countryside Act 1981 (WCA) (as amended)² transposes the obligations set out in the Bern Convention³ into national law. The Bern Convention aims to ensure conservation and protection of wild plant and animal species and their natural habitats, particularly where this requires cooperation between contracting parties.
- 1.10 Appendix II of the Convention includes animal species (fauna) strictly protected under special legal and management conservation measures, including the ban on capturing, keeping, disturbance, deliberate killing, possession and sale.
- 1.11 The WCA (as amended) is the major legal instrument for wildlife protection in the UK and provides a national level of protection to specific native animals. All bat species are listed in Schedule 5 of the WCA and, in addition to the provisions of the Conservation Regulations 2017, these species are therefore also afforded protection in respect of paragraph 9(4)(b) (disturbance while occupying a place or structure of shelter), paragraph 9(4)(c) (obstruction of access to a place or structure of shelter) and paragraph 9(5) (relating to possession and sale).

Environment (Wales) Act 2016

- 1.12 Under the Environment (Wales) Act (2016)⁴, Section 7 requires biodiversity lists to be produced. These lists include types of species which are of "Principle Importance" for the purpose of maintaining and enhancing biodiversity in relation to Wales. This list supersedes the duty in Section 42 of the NERC Act 2006.

² Wildlife and Countryside Act 1981: Elizabeth II. 1981 Chapter 69. (1981) London: Her Majesty's Stationery Office.

³ Convention on the Conservation of European Wildlife and Natural Habitats. Bern, 19.IX.1979.

⁴ Environment (Wales) Act 2016 (legislation.gov.uk), accessed Nov 22

- 1.13 Bat species listed under Section 7 include Barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, Noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*.⁵

Wrexham Biodiversity Action Plan (2002)

- 1.14 The lesser horseshoe bat is also listed under the Wrexham Local Biodiversity Action Plan (LBAP).
- 1.15 Species identified under the LBAP are 'priority species' included under the UK BAP list of 'priority species' and/or are locally significant 'priority species'. The LBAP is aimed at addressing changes in the distributions of 'priority species' and opportunities that arise for conservation action.

⁵ master s7 species list may 2016 final.pdf, accessed Nov 22

2.0 Methods

- 2.1 The following bat surveys were undertaken in accordance with the Bat Conservation Trust (BCT) Survey Guidelines (Collins, 2016⁶).

Ecology Desk Study

- 2.2 Information regarding historic flora species records, protected habitats and protected sites was collated as part of a desk study which was completed in January 2022.

Roost Surveys

Buildings

Preliminary Roost Assessment

- 2.3 A daytime building external survey was carried out at buildings B1- B14 on 25th March 2022 by licenced bat TEP ecologist Stephanie Davies (Licence Ref: 2020-44415-CLS-CLS) assisted by TEP ecologist Alex Fitzroy.
- 2.4 The buildings were inspected both externally and internally for field signs of bats such as droppings, scratch marks, insect remains and urine smear marks. Binoculars and an endoscope were used as aids. The survey was conducted with year-round use by bats in mind.
- 2.5 Buildings were categorised according to their bat roost suitability as determined by the characteristics and potential roost features (PRF) detailed in Table 1.

Table 1: Categorisation of buildings for bat roost suitability

Suitability	Characteristics		Potential Roost Features
High	Several of the following features:	Pre – 20th century buildings. Agricultural buildings of traditional brick, stone or timber construction. Large unobstructed flying spaces. Roof warmed by sun, in particular south facing roofs without shade. Large roof timbers with gaps at joints (e.g. mortise joints), cracks and holes. Numerous access points for bats to fly into. Buildings near woodland and/or water. Low levels of disturbance. Buildings may be poorly maintained or aged, providing access points for bats into roof structures or crevices in bridges, but at the same time not too draughty, wet or cool.	PRF that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time (e.g. maternity/hibernation) due to their size, shelter, protection, conditions and surrounding habitat.
Moderate	Some of the following features:		One or more PRF that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (maternity/hibernation).

⁶ Collins, J (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London

Suitability	Characteristics	Potential Roost Features
Low	Modern/intact buildings with few potential access points for bats. Brick buildings often with pitched slate or tile roofs but may have small or cluttered roof space. Flat roofed buildings with weatherboards or similar feature at the eaves with potential bat access behind or into building. Cooler, shaded, light or draughty voids. Buildings often lacking connectivity to woodland or areas of water.	One or more PRF that could be used by individual bats opportunistically, however, these PRFs do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Negligible	Flat roof structures lacking weatherboards, hanging slates or cladding. Modern/intact buildings with no bat access points. Lacking connectivity to any woodland or areas of water. High levels of regular disturbance. High levels of internal/external lighting. Buildings in very poor condition such that internal spaces are not weatherproof, being exposed to high levels of light, wind and/or rain.	Negligible habitat features on site likely to be used by roosting bats.

Limitations

- 2.6 Bat droppings are one of the field signs the survey looks to identify as evidence of bat activity. However, droppings on external surfaces can be washed or blown away by weather. Weather prior to and during the daytime external and internal survey was calm with no rain and therefore there was no significant constraint to the external inspections.

Nocturnal Bat Roost Surveys

- 2.7 The buildings B1 and B8 were identified during the daytime assessment to have moderate suitability for roosting bats and buildings B3, B6, B7 and B13 was identified to have low suitability for roosting bats. These buildings were therefore subject to further nocturnal surveys in accordance with its evaluation (high, moderate or low suitability receiving three, two or one nocturnal survey, respectively).
- 2.8 Surveys were led by bat licenced ecologist Rosie Langley (Bat licence ref: 2018-35011-CLS-CLS). Eight surveyors were stationed at fixed vantage points around B1 and B8 with four other surveyors, one for each building, on B3, B6, B7 and B13 during the first survey. The surveyors were positioned such that all elevations and gables were in view. All potential building access points for bats were covered by strategic placements of surveyors. Dusk emergence surveys commence 15 minutes before sunset and finish 1.5 hours after sunset.
- 2.9 A combination of full spectrum and frequency division detectors (Elekon Batlogger M or Anabat Express) were employed at each vantage point on all surveys. Radios were utilised for communicating between surveyors to reduce interference from mobile phones and to enable coordination when recording observations.

- 2.10 During each survey observations such as bat species, the number of bats entering or leaving the building, the location of entry and exit points, behaviours such as close interest in a building or its features, commuting or passing bats and weather conditions were recorded.
- 2.11 Weather conditions were recorded at the start and end of surveys in addition to any significant change in condition during the survey. Weather was optimal during all the nocturnal surveys, being dry with little breeze and temperatures ranging from 19°C at the start to 13°C at the finish. Surveys were carried out during the optimal survey period of the year (mid-April to mid-September). Full details of weather conditions are shown in Table 2.

Table 2: Weather Conditions During Roost Surveys 2022

Survey Date	Sunrise/ Sunset	Survey Time	Temperature (°C)	Rain	Cloud*	Wind**
23.06.22	21:42	Start: 21:27	19	0	7	1
		End: 22:12	17	Light	7	1
20.07.22	21:25	Start: 21:00	17	0	8	3
		End: 23:00	13	0	8	4

* Cloud cover is reported in oktas or eighths with the additional convention that 0 oktas represents the complete absence of cloud, 1 okta represents a cloud amount of 1 eighth or less, but not zero, 7 oktas represents a cloud amount of 7 eighths or more, but not full cloud cover, 8 oktas represents full cloud cover with no breaks, 9 oktas represents sky obscured by fog or similar.

** Wind strength is reported using the Beaufort Scale of Wind Force, this scale runs from 0 to 12, information on the conditions experienced during surveys are as follows: 0 – Calm (vertical smoke); 1 – Light Air (slight smoke drift); 2 – Light Breeze (leaves gently rustle); 3 - Gentle Breeze (Small twigs constantly move); 4 - Moderate breeze (Small branches begin to move); 5 - Fresh breeze (small trees in leaf begin to sway).

Limitations

- 2.12 The nocturnal bat roost surveys were undertaken during the optimal survey period (May – September) and in optimal weather conditions, with temperatures above 10°C and little rain.
- 2.13 Wind was high during the second survey visit; however, this was recorded as gusts rather than continuous wind. The effect of wind speed on bat activity varies depending on the topography of the landscape.
- 2.14 Tenants could only provide access to the moderate buildings during the evenings; therefore access could not be granted to carry out a dawn survey. However, this is not considered to be a significant constraint as an additional dusk emergence survey was carried out instead.

Trees

Preliminary Roost Assessment

- 2.15 All trees within the site boundary were subject to daytime ground level assessment (GLTA) for their suitability to support roosting bats. The GLTA was completed on 25th and 29th March 2022 by licenced bat TEP ecologist Stephanie Davies and TEP ecologist Alex Fitzroy.
- 2.16 Trees were viewed from the ground with the aid of binoculars and a high-powered torch (fitted with a red filter) where necessary. Where accessible from the ground, potential roost features (PRF) were closely inspected using an endoscope and torch as aids. Based on the PRF characteristics, trees were categorised for their roost suitability according to the criteria summarised in Table 3.

Table 3: Categorisation of trees for bat roost suitability

Suitability	Roosting habitats
Negligible	No potential roost features are present that are likely to be used by bats.
Low	A tree with one or more potential roost features that could be used by individual bats opportunistically, but which do not offer sufficient space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Moderate	A structure or tree with one or more potential roost features that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat, but which is unlikely to support a roost of high conservation status (maternity or hibernation).
High	A structure or tree possessing one or more potential roost features that are suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time, due to their size, shelter, protection, conditions and surrounding habitat.

Survey Constraints

- 2.17 Weather conditions during the first survey visit meant the PRA was undertaken in very bright light conditions. Therefore, it is possible some potential roost features could have been missed.
- 2.18 Some PRFs could not be fully categorised from the ground due, for example, to the angle of view or elevation of the PRF. In these instances, trees were categorised based on the ground-based view of the PRF.
- 2.19 Several trees could not be inspected closely due to access issues relating to health and safety, such as the presence of water.
- 2.20 There are no seasonal constraints for undertaking preliminary bat roost tree assessments, however the optimal period for undertaking this survey is between December and March when trees are out of leaf. The GLTA was made during the optimal period in March.

Aerial Inspections of Trees

- 2.21 Daytime aerial inspections of Potential Roost Features (PRF) were carried out of trees identified during the Ground Level Tree Assessment (GLTA) to have PRFs with high or moderate suitability and of those trees for which PRF suitability could not be confidently categorised during the GLTA. Trees were subject to aerial inspections where they are likely to be impacted by the proposals.
- 2.22 Aerial PRF inspections were completed in June and July of 2022 by licenced bat ecologist Stewart Bradshaw (Bat License Registration: 2015-15615-CLS-CLS).
- 2.23 Aerial inspections were made from ladder or by rope climbing according to the location of the PRFs. All PRF identified on the tree were closely inspected utilising an endoscope and torch.
- 2.24 The roost suitability of each tree was re-categorised as appropriate to the findings of the aerial inspections.

Survey Constraints

- 2.25 T50 and T107 were deemed unsafe to climb due to the location of the tree and the dead wood present on the tree.
- 2.26 T86 and G4.2 could not be fully checked via aerial surveys due to a bees or wasps nest being present.
- 2.27 There were no other survey constraints affecting the aerial assessments of the trees.

3.0 Results

Ecology Desk Study

3.1 The desk study identified the following bat records:

- Brandt's bat *Myotis brandtii* (EPS, WCA5);
- Brown long-eared bat *Plecotus auritus* (EPS, WCA5, S7);
- Common pipistrelle *Pipistrellus pipistrellus* (EPS, WCA5, S7, LBAP);
- Daubenton's bat *Myotis daubentonii* (EPS, WCA5);
- Lesser horseshoe bat *Rhinolophus hipposideros* (EPS, WCA5, S7, LBAP);
- Myotis bat *Myotis sp.* (EPS, WCA5);
- Natterer's bat *Myotis nattereri* (EPS, WCA5);
- Noctule *Nyctalus noctula* (EPS, WCA5, S7);
- Soprano pipistrelle *Pipistrellus pygmaeus* (EPS, WCA5, S7); and
- Whiskered bat *Myotis mystacinus* (EPS, WCA5).

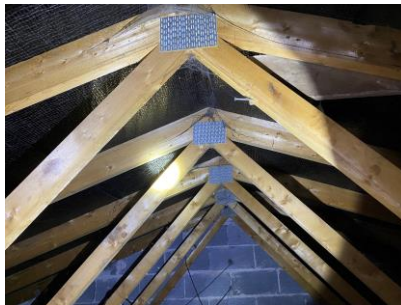
Roost Surveys

Buildings

Preliminary Roost Assessment of Buildings

- 3.2 The results of the preliminary roost assessment of buildings are summarised in Table 4 and shown in Drawing G9134.007A and G9134.031.
- 3.3 Based on the daytime surveys, buildings B1 and B8 were assessed to have moderate roost suitability; buildings B3, B6, B7 and B13 were assessed to have low roost suitability; and all other buildings (B2, B4 - B5, B9 - B12 and B14) were assessed to have negligible suitability.
- 3.4 Buildings categorised as negligible did not contain any features that may support roosting bats or contained features which were heavily waterlogged and would therefore not be utilised by bats for roosting.

Table 4: Preliminary Roost Assessment of Buildings for suitability to support roosting bats

Building ID	Description and Feature(s)	Photos	BCT Category
B1	B1 is a single storey brick-built bungalow with a multi-pitched tiled roof. Several gaps are present along the edge of the roof tiles on the gable end where mortar has worn away (west and south elevations), with gaps also present between the external brickwork and wooden soffits on the western aspect and between the brickwork and the head of the window. There is also a large gap in the soffit on the southern aspect. A missing ventilation panel on the northern aspect allows for access into the soffit, where a blue tit was recorded nesting. Internally a single loft space was present. Bitumen felt lining was present throughout and was in good condition, with only minor gaps where the cuts overlap. No evidence of bats was found. However, with the bitumen felt being in good condition and well-sealed the likelihood of finding evidence of bats such as droppings is limited. The main roosting opportunities are therefore between the tiles and bitumen felt lining rather than in the loft space itself. No evidence of roosting bats was found.	 	Moderate
B2	B2 is an open, pitched corrugated metal stable block, with brick walls separating each stable. The building is double height with wood and metal framed. No evidence of roosting bats was found. No suitable roost features are present. The building is open on the eastern aspect and the roof is open to the rest of the building. There was evidence of nesting birds internally.	 	Negligible

Building ID	Description and Feature(s)	Photos	BCT Category
B3	B3 is a single-storey brick-built stable block with flat corrugated plastic roof, adjoined to B2. The edges of the roof are secured with iron. There are gaps between the raised metal edges and the brickwork which could be used opportunistically by individual bats. No evidence of roosting bats was found. Potential for nesting birds due to adequate access.	 	Low
B4	B4 is a wooden stable block with a single pitched roof with the roof membrane exposed. Some of the wooden panels forming the shed structure have fallen away. Internally the roof is lined with tarpaulin. No evidence of roosting bats was found. No suitable roost features are present. Potential for nesting birds due to adequate access.	 	Negligible
B5	B5 is a large, corrugated metal barn housing horse stables. It is a large open space with a pitched metal roof and exposed beams. It is open fronted on the western aspect. The building is double height and metal framed. No evidence of roosting bats was found. No suitable roost features are present. Potential for nesting birds due to adequate access.		Negligible

Building ID	Description and Feature(s)	Photos	BCT Category
B6	B6 is a single-storey brick-built outbuilding with a pitched corrugated metal roof a small section of which is corrugated uPVC. Occasional wooden panels are present along the walls. Gaps are present between the brick walls and wood panelling, which provide opportunistic roosting opportunities for individual bats. No evidence of roosting bats was found. Potential for nesting birds due to adequate access.		Low
B7	B7 is a single-storey brick-built outbuilding with a pitched corrugated metal roof, of similar construction to B6. The two buildings are adjoining. Internally, the roof is lined with wooden boarding. No evidence of roosting bats were identified. Gaps are present between the brick walls and wood panelling, which provide opportunistic roosting opportunities for individual bats. No evidence of roosting bats was found. Potential for nesting birds due to adequate access.	 	Low
B8	B8 is a two-storey residential dwelling, with adjoining single-storey sections. The brickwork is in good condition with no missing mortar. There are some slipped roof tiles which could allow access between the tiles and lining, suitable for roosting bats. Internally two loft spaces are present, one within the single-storey section and one within the two-storey. The main loft spaces are well insulated and partially converted into additional living space/storage. Windows are present resulting in a well-lit environment. No gaps are present in the internal lining. No evidence of roosting bats was found.	 	Moderate

Building ID	Description and Feature(s)	Photos	BCT Category
B9	B9 is a wooden garden shed with a pitched wooden roof. The structure is in some disrepair. No roof lining is present. There are gaps between the roof and walls letting plenty of light in and leaving the building exposed to the elements. No evidence of roosting bats was found. Potential for nesting birds due to adequate access.	 	Negligible
B10	B10 is a single-storey, double height, wooden framed outbuilding with a pitched corrugated iron roof. Wood panelling is present at the gable end walls. Each gable end has a bird box attached, although the eastern box has fallen into disrepair. Internally, the roof void is open to the building and is used as an additional storage space. Timber beams are present. The building is used for as a workshop/garden storage. No evidence of roosting bats was found. No suitable roosting habitat was identified. Potential for nesting birds in western gable bird box and internally due to adequate access.	 	Negligible

Building ID	Description and Feature(s)	Photos	BCT Category
B11	B11 is a single-storey brick outbuilding/shed, with a corrugated iron pitched roof and adjoining mono-pitched roof on the northern aspect. The roof is in disrepair with sections completely missing and parts having been replaced with corrugated plastic. The building is wooden framed, including the windows. Several windows are partially open. Internally, an open roof void with no lining is present leaving the internal space fairly exposed to light and the elements. No evidence of roosting bats was found. No suitable roosting habitat was identified. Potential for nesting birds due to adequate access.	 	Negligible
B12	B12 is a small wooden dog kennel with lean-to roof. The western aspect is partially open fronted. The doors are wooden with no frames. No evidence of roosting bats was found. No suitable roosting habitat was identified. Potential for nesting birds due to adequate access.		Negligible
B13	B13 is a single-storey brick garage, with a pitched slate roof. uPVC windows and doors are present. There are large gaps at the top of the walls, below the eaves, where brickwork is unfinished, allowing for access into the cavity walls. Roof tiles are generally in good condition, however there is a missing tile on the western pitch creating access for roosting opportunities between the roof tiles and lining. Internally an open roof void with underfelt is present. No evidence of roosting bats was found. Potential for nesting birds due to adequate access.	 	Low

Building ID	Description and Feature(s)	Photos	BCT Category
B14	B14 is a static caravan. No roosting features were present.		Negligible

Nocturnal Bat Roost Surveys

- 3.5 No bats were recorded emerging from or returning to roost within any of the buildings during the two nocturnal bat roost surveys. Weather conditions for all surveys are provided in Table 2.
- 3.6 The first bat contact recorded during the dusk emergence survey on the 23rd of June 2022 was of a noctule bat at 21:46 (sunset +5mins), this consisted of one noctule individual flying high overhead and commuting past the site. At 22:05 (sunset + 23mins) a common pipistrelle was recorded foraging in front of the stable building B2 and commuting west to east past the bungalow B1. The foraging activity was consistent until the end of the survey with both common pipistrelle and soprano pipistrelle recorded. The maximum number of bats seen at once was two. Foraging and commuting activity was limited to the south of site during the first dusk survey.
- 3.7 Bat species recorded during the second survey were limited to common pipistrelle. The first contact recorded on the dusk emergence survey on the 20th of July was at 21:53 (sunset +27mins) and consisted of one common pipistrelle individual commuting south to north over building B8. The only other observation was one common pipistrelle foraging around building B1 and heading north.

Trees

Preliminary Roost Assessment of Trees

- 3.8 The locations of the trees within the site boundaries that were subject to GLTA are illustrated in Drawings D9134.01.001-004. The tree numbering matches that of the arboricultural drawings. The results of the GLTA are illustrated in the Bat Ground Level Tree Assessment Results Drawing G9134.015.1-4A.
- 3.9 Tree descriptions and roost suitability categorisations assigned from the GLTA are detailed in Table 5 and summarised in Table 6.

Table 5: Results of ground level assessments

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T1	A middle age pedunculate oak tree situated within the field boundary hedgerow. SJ 38947 50876. A: Desiccated branch and lifted bark on north-west aspect. 	Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T2	A middle age pedunculate oak tree situated within the field boundary hedgerow (H1) with no PRFs viewed from the ground. SJ 38940 50892.	Negligible	N/A
T3	A middle age pedunculate oak tree situated within the field boundary hedgerow (H1) with no no PRFs viewed from the ground. SJ 38933 50913.	Negligible	N/A

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T4	A mature pedunculate oak tree situated within the field boundary hedgerow (H1). SJ 38927 50940. PRFs: A: Large south facing cavity in east leading stem at approximately 2 m high. B: Large tear out near top of east leading stem. C: North facing cavity on west leading branch at approximately 2 m. D: North facing knot hole on west leading branch at approximately 5 m. E: Desiccated limb with splits and cavities on east leading branch.	 High	Aerial climb and endoscopic inspection to further assess PRFs and tree categorisation. If remains high suitability, three separate nocturnal roost surveys. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.
T5	A middle age pedunculate oak tree situated with the field boundary hedgerow (H1). SJ 38925 50949. PRFs: A: West facing knot hole on desiccated branch at approximately 4 m. B: East facing knot holes at approximately 3 m and 6 m high.	 Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: Not suitable for aerial climb due to deadwood.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T6	A middle age pedunculate oak tree situated within the field boundary hedgerow (H1). SJ 38919 50975. PRFs: A: Thick ivy coverage forming plates offering roosting opportunities, particularly on western aspect. B: Transverse snaps and broken limbs in upper canopy.	 Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Aerial climb should not be undertaken during active bat season where there is potential to injure bats roosting under ivy.
T7	A middle age pedunculate oak tree situated within the field boundary hedgerow (H7). SJ 38905 51016. PRFs: A: South facing knot hole at approximately 5 m high. B: Desiccated limb with crack, west facing at approximately 5 m high. C: East facing knot hole at approximately 6 m high.	 Moderate	Aerial climb and endoscopic inspection to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T8	A middle age pedunculate oak tree situated within the field boundary hedgerow (H1). SJ 38895 51039. PRFs: A: Large vertical split on stem within upper canopy. B: Large wound on eastern aspect at approximately 1.75 m. Endoscoped during the GLTA. The PRF is approximately 10 cm in depth, as such it does not offer any hibernation potential.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T9	A middle age pedunculate oak tree situated within the field boundary hedgerow. SJ 38896 51070. PRFs: A: North facing desiccated limb and a desiccation fissures.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T10	A middle age pedunculate oak tree situated within the field boundary hedgerow. SJ 38906 51073. No potential roosting features recorded.		Negligible	N/A

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T11	A middle age pedunculate oak tree situated within the hedgerow. SJ 38914 51076. PRFs: A: South leading branch has decayed and split, at approximately 8 m. B: Knot hole on south-east leading branch at approximately 8 m, with additional cavity just below.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T12	A middle age pedunculate oak tree situated within the field boundary hedgerow. SJ 38920 51079. PRFs: A: Knot hole, south facing at approximately 6 m, appears to have some depth.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T13	A large mature pedunculate oak tree situated within the field boundary hedgerow (H2). SJ 38916 51127 PRFs: A: Four small cavities in close proximity, east facing on south leading branch at approximately 5 m. B: North facing knot hole at approximately 6 m. C: Small canker on western aspect at approximately 8 m. D: Cavity visible from western aspect on south leading branch at approximately 6 m height.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T14	A large middle age pedunculate oak tree situated within the field boundary hedgerow (H2). SJ 38915 51134. PRFs: A: Large cavity visible from south-east aspect at approximately 1 m. B: Hazard beam visible from north-east aspect at approximately 8 m. C: Knot hole visible from north aspect at approximately 4 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T15	A twin stemmed, middle age pedunculate oak tree situated within the hedgerow (H2). SJ 38913 51144. PRFs: A: Large helical split of one of the main stems. Moderately exposed to the elements with no hibernation potential.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T16	A middle age pedunculate oak tree situated within the hedgerow (H2). SJ 38911 51150. A: Large split/wound on main stem from ground level up to 2 m, visible from western aspect. Moderately exposed to the elements, limited roosting suitability.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T17	A middle age pedunculate oak tree situated within the field boundary hedgerow (H2). SJ 38909 51158. PRFs: A: Cavity on main stem at approximately 1m high, east facing. Narrow opening but opens internally upon endoscope inspection. Has hibernation potential. B: Knot hole visible from north aspect at approximately 5 m. C: Cavity on main stem visible from south-west aspect at approximately 3 m. D: Downward facing cavity on west leading branch.	 High	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August. PRF A has hibernation potential hibernation surveys are required between December and February.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T18	A middle age pedunculate oak tree situated within the field boundary hedgerow (H2). SJ 38907 51164. PRFs: A: Small knot hole visible from east aspect appears well occluded from the ground.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T19	A large mature pedunculate oak tree situated within the field boundary hedgerow (H2). SJ 38906 51171. PRFs: A: Cavity in upper canopy visible from south-east aspect at approximately 10 m. B: Two cavities in close proximity visible from south aspect at approximately 9 m. C: East leading branch is decayed with cavity present, visible from north aspect. D: West leading branch has a cavity, visible from north aspect. E: Squirrel hole visible from west aspect at approximately 6 m. F: Small cavity present on heavily decayed south-west leading branch.		High Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.
T20	A middle age pedunculate oak tree situated within the hedgerow. SJ 38903 51178. No PRF during GLTA.	Negligible	N/A
T21	A middle age pedunculate oak tree situated within the hedgerow. SJ 38894 51207. No PRF visible during GLTA.	Negligible	N/A
T22	A middle age pedunculate oak tree situated within the hedgerow. SJ 38890 51219. No PRF visible during GLTA.	Negligible	N/A

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T23	A squat middle age pedunculate oak tree situated within the hedgerow. SJ 38889 51224 PRFs: A: Pruning cut and desiccation cavity between heartwood and bark. Visible from eastern aspect.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T24	A large mature pedunculate oak tree with no major defects. SJ 38878 51272. No PRF visible during GLTA.		Negligible	N/A
T25	Standing dead pedunculate oak tree situated within hedgerow (H3). SJ 38871 51325. PRFs: A: Numerous due to lifted bark and desiccation fissures throughout. Knot hole with cavity visible from east aspect at approximately 6 m.		Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: May not be suitable to climb due to amount of deadwood.
T26	Mature pedunculate oak tree situated within hedgerow (H3). SJ 38869 51338. No PRF visible during GLTA.		Negligible	N/A

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T27	Mature pedunculate oak tree situated within hedgerow (H3). SJ 38864 51355. No PRF visible during GLTA.	Negligible	N/A
T28	Large middle age pedunculate oak tree situated within the hedgerow (H3). SJ 38860 51378. PRFs: A: Tear out visible from south-west aspect at approximately 5 m. B: Cavity on south leading branch visible from the north-west aspect at approximately 3 m. Access into cavity also present on east aspect.	 Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T29	Middle age pedunculate oak tree with partial ivy coverage situated within the hedgerow. SJ 38856 51406 PRFs: Partial ivy cladding may obscure additional features but does not act as a PRF itself. A: Two knot holes in proximity visible from west aspect at approximately 3 m.	 Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T30	Large mature pedunculate oak tree situated within hedgerow (H3). SJ 38855 51416. PRFs: A: Knot hole visible from southern aspect at approximately 7 m. Appears moderately superficial leaving potential for opportunistic roosting by single bats only. B: Cavity visible from eastern aspect at approximately 2.5 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T31	Middle age pedunculate oak tree situated within the hedgerow. SJ 38851 51429. PRFs: A: Knot hole on eastern aspect at approximately 3 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T32	A middle age pedunculate oak tree situated within the hedgerow. SJ 38847 51447. No PRF visible during GLTA.		Negligible.	N/A

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T33	A middle age pedunculate oak tree situated within the hedgerow. SJ 38845 51452. PRFs: A: Cavity visible from eastern aspect traversing the entirety of north leading branch. B: Upward facing feature visible from eastern aspect on south-west leading branch. C: Tear out visible from western aspect on south-west leading branch at approximately 6 m.		Moderate Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T34	A middle age pedunculate oak tree situated within the hedgerow. SJ 38844 51466. No PRF visible during GLTA.	Negligible	N/A
T35	A middle age pedunculate oak tree situated within the hedgerow. SJ 38839 51481. No PRF visible during GLTA.	Negligible	N/A
T36	A middle age pedunculate oak tree situated within the hedgerow SJ 38834 51495. PRFs: A: Longitudinal crack visible from eastern aspect. Moderately exposed.		Moderate Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T37	A middle age pedunculate oak tree situated within the hedgerow. SJ 38832 51505. No PRF visible during GLTA.	Negligible	N/A
T38	A middle age pedunculate oak tree situated within the hedgerow. SJ 38645 51415. No PRF visible during GLTA.	Negligible	N/A
T39	A middle age pedunculate oak tree situated within the field boundary hedgerow (H5). SJ 38654 51402. PRFs: A: Thick ivy cladding on northern aspect of stem and into the canopy provides potential roosting habitat. May also be obscuring tree cavities.	 Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Aerial climb should not be undertaken where there is potential to injure bats roosting under ivy.
T40	Multi-stemmed mature pedunculate oak tree situated within the hedgerow (H5). SJ 38661 51389. PRFs: A: Tear out on north leading branch visible from western aspect. B: Knot hole on south-west leading branch visible from eastern aspect. C: Large cavity visible from northern aspect on north leading branch. Moderately exposed.	 Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T41	A middle age pedunculate oak tree situated within the hedgerow (H5). Ivy clad canopy. Ivy does not provide PRF itself. SJ 38666 51381. PRFs: A: Knot hole visible from west aspect at approximately 4 m. B: Tear out in upper stem. C: Large longitudinal crack visible from north-east aspect with multiple cavities within. No hibernation potential due to openness.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T42	A middle age pedunculate oak tree situated within the hedgerow (H5). SJ 38672 51369. PRFs: A: Cavity visible from western aspect on south-west leading branch near base. B: Desiccation fissure on upper part of same branch as A.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T43	A middle age pedunculate oak tree situated within the hedgerow. SJ 38691 51343. No PRF visible during GLTA.		Negligible	N/A

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T44	A mature pedunculate oak tree situated within the field boundary hedgerow (H5). SJ 38710 51311. PRFs: A: Main stem is hollowed out with large entrance on eastern aspect. Light is visible internally suggesting no hibernation/maternity potential due to unsuitable conditions. Partial ivy cladding of main stem. PRFs throughout.	 Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: Not suitable to climb.
T45	A mature pedunculate oak tree situated within the hedgerow (H5). SJ 38715 51302. PRFs: A: Tear out visible from north-west aspect at approximately 6 m. B: Knot hole visible from west aspect at approximately 6 m. C: Large tear out visible from east aspect. Does extend into the stem but the conditions do not appear suitable for hibernation or maternity roosts.	 Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: Not suitable to climb.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T46	A mature pedunculate oak tree with heavily burred and twisted main stem. Situated within hedgerow. SJ 38780 51198. PRFs: A: Knot hole visible from west aspect at approximately 2 m. B: Cavity visible from east aspect at approximately 4 m.		Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: Tree unsuitable to climb.
T47	A middle age pedunculate oak tree clad in ivy. Ivy does not provide suitable PRF itself, but may be obscuring other PRFs. SJ 38790 51179. PRFs: A: Large cavity in main stem partially covered by ivy. B: Knot hole visible from southern aspect at approximately 3 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

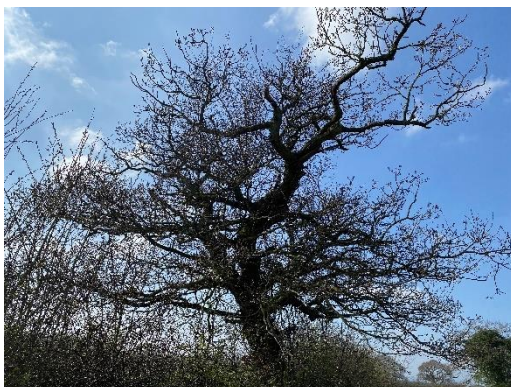
Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T48	A small middle age pedunculate oak tree situated within the field boundary hedgerow (H6). SJ 38775 51169. PRFs: A: Main stem has considerable decay with numerous associated cavities throughout.		Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: Not suitable for aerial climb due to amount of deadwood.
T49	A large mature pedunculate oak tree situated within the field boundary hedgerow (H6). SJ 38775 51169. PRFs: A: Tear out on underside of branch visible from southern aspect at approximately 6 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T50	A middle age pedunculate oak tree situated within the field boundary hedgerow (H6). SJ 38767 51164. PRFs: A: Canker present where main stem forks, visible from southern aspect at approximately 6 m. B: Cavity associated at pruning cut visible from the south-eastern aspect. C: Desiccated limb with hollowing visible from northern aspect at approximately 6 m.		Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: Not suitable for aerial climb due to amount of deadwood.
T51	A middle age pedunculate oak tree situated within the hedgerow. SJ 38760 51156. No PRF visible during GLTA.		Negligible.	N/A
T52	A middle age pedunculate oak tree situated within the field boundary hedgerow. SJ 38747 51150. PRFs: A: South-facing knot hole at approximately 4 m. B: South-facing tear out at approximately 8 m. C: North-facing cavity associated with desiccated limb at approximately 4 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T53	A middle age pedunculate oak tree situated within the field boundary hedgerow. SJ 38735 51145. PRFs: A: Knot hole visible from southern aspect at approximately 3 m appears well occluded from ground. B: Knot hole visible from southern aspect at approximately 5 m appears well occluded from ground.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T54	A smaller middle age pedunculate oak tree situated within the field boundary hedgerow (H6). SJ 38728 51145. PRFs A: Cavity visible from north aspect at approximately 3 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T55	A middle age pedunculate oak tree situated within the hedgerow. SJ 38632 51107. No PRF visible during GLTA.		Negligible.	N/A

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T56	A large mature pedunculate oak tree situated within the field boundary hedgerow (H7). SJ 38615 51084. PRFs: A: Woodpecker hole visible on south-east aspect at approximately 5 m. B: Desiccated limb with associated cavity and lifted bark. Visible from north-west aspect at approximately 4 m. C: Small cavity visible from north-west aspect on west leading branch at approximately 7 m.		High Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.
T57	A middle age pedunculate oak tree situated within the hedgerow. SJ 38620 51075. No PRF visible during GLTA.	Negligible.	N/A
T58	A middle age pedunculate oak tree situated within the hedgerow. SJ 38629 51045. No PRF visible during GLTA.	Negligible.	N/A

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T59	A middle age pedunculate oak tree situated within the field boundary hedgerow. SJ 38646 50982. PRFs: A: Upward facing cavity on west leading branch visible from east aspect at approximately 5 m.		Moderate.	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T60	A middle age pedunculate oak tree situated within the hedgerow. SJ 38657 50931. No PRF visible during GLTA.		Negligible	N/A
T61	A middle age pedunculate oak tree situated within the field boundary hedgerow. SJ 38662 50907. PRFs: A: Broken limb that is split from main stem, visible from south-east aspect.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T62	A mature pedunculate oak tree situated within the field boundary hedgerow. SJ 38817 51039. PRFs: A: Large cavity visible on south leading branch. B: Transverse snap with associated cavities on east leading branch.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T63	A middle age pedunculate oak tree situated within the hedgerow. SJ 38799 51035. No PRF visible during GLTA.		Negligible.	N/A
T64	A middle age pedunculate oak tree with scrubby appearance. SJ 38663 51038. PRFs A: Knot hole visible on desiccated branch from eastern aspect at approximately 5 m. B: Upward facing cavity on same branch as PRF A, visible from northern aspect.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T65	A mature multi-stemmed goat willow .SJ 38753 50931. No PRF visible during GLTA.		Negligible	N/A
T66	A middle age pedunculate oak tree situated within the hedgerow. SJ 38838 50856. No PRF visible during GLTA.		Negligible	N/A

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T67	A mature pedunculate oak tree growing out of hedgerow and ditch. SJ 38689 50869. PRFs: A: North-west leading branch is desiccated with associated lifted bark and cavities.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T68	A middle-aged common ash along southern site boundary. SJ 38669 50865. No PRF visible during GLTA.		Negligible	N/A
T69	A large mature oak tree that has had a recent total stem failure. SJ 38556 51066. PRFs: Multiple features associated with tear out/stem failure resulting in large cavity and splits. Conditions not suited to hibernation/maternity roosts due to openness.		Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: Not suitable for aerial climb.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T70	A mature pedunculate oak tree with sparse ivy cladding situated within the field boundary hedgerow (H22). Ivy does not provide suitable PRF itself. SJ 38536 51076. PRFs: A: East-facing cavity on limb at approximately 6m. B: Snapped branch with associated west-facing cavity at approximately 6 m. C: Desiccated limb with associated lifted bark visible from western aspect.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T71	A middle age pedunculate oak tree situated within the field boundary hedgerow. SJ 38511 51033. PRFs: A: Transverse snap at approximately 6 m, north-facing. Appears exposed to the elements. B: Pruning cut with associated lifted bark, south-facing at approximately 3 m. Appears exposed to the elements.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T72	A mature sessile oak tree in the field boundary where hedgerows H10 and H21 meet. SJ 38488 51015. No PRFs visible during GLTA.		Negligible	N/A

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T73	A middle age pedunculate oak tree situated within field boundary hedgerow (H13) with remnants of tree house attached. Ivy cladding of stem. SJ 38461 51003. PRF features: Various due to tree house. A: Potential crevices where the tree house remnants are attached to the trunk and branches.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T74	A middle age pedunculate oak tree situated within field boundary hedgerow (H13), partially covered in ivy. Ivy does not provide suitable PRF itself, but may be obscuring other PRFs. SJ 38454 50994. PRF features: A: Knot hole south-east facing at approximately 2.5 m high. Does not appear deep. B: Transverse snap south-east facing at approximately 3 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T75	A mature pedunculate oak tree with considerable deadwood, situated within hedgerow and ditch. SJ 38442 50994. PRF features: A: Large desiccation fissure/cavity south-west facing at approximately 5 m. B: Lifted bark south-west facing on north-west leading branch, at approximately 4.5 m. C: Transverse snap/crack south-east facing at approximately 6 m. D: Potential cavity on desiccated branch/ram's horns north-west facing at approximately 6 m. E: Lifted bark, potential cavity, north-facing at approximately 4 m.	 High	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T76	A middle age pedunculate oak tree situated in hedgerow (H13), bramble covering base. SJ 38421 50981. PRF features: A: Cavity caused by desiccation fissure and lifted bark. South-facing at approximately 3 m. B: Long longitudinal crack, north facing running up main stem to approximately 4.5 m. Appears superficial.		Moderate Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T77	A mature pedunculate oak tree situated within the field. SJ 38389 50974. PRFs: A: Knot hole south-east aspect, central branch, at approximately 7 m. Unable to rule out from ground level.		Moderate Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T78	A middle age pedunculate oak tree situated within the field. SJ 38381 50987. PRFs: A: Knot hole on south-eastern aspect of main stem at head height. Endoscoped during GLTA. Shallow feature offering limited opportunistic roosting only. B: Transverse snap offering shallow activity on south-west aspect at approximately 3 m. Shallow feature with limited opportunistic roosting potential.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T79	A mature pedunculate oak tree situated within field. SJ 38346 51040. A: Desiccation fissure on north-east aspect of east leading branch at approximately 2.5 m.		Moderate.	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T80	A middle age pedunculate oak situated within the field boundary hedgerow (H13). SJ 38350 50951. No PRFs visible during GLTA.		Negligible	N/A

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T81	A mature pedunculate oak located within hedge H13. SJ 38292 50925 PRFs: A: Pruning cut visible from the southern aspect with desiccation approximately 3.5m high. B: A wound on the northern aspect approximately 6m high.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T82	A middle age pedunculate oak tree situated within the hedgerow (H11). SJ 38481 50980. No PRFs visible during GLTA.		Negligible	N/A
T83	Mature goat willow situated within the bungalow garden. SJ 38494 50879. No PRFs visible during GLTA.		Negligible	N/A
T84	A middle age pedunculate oak tree with ivy cover. Ivy does not provide suitable PRF itself. Situated within the hedgerow. SJ 38516 51103. PRFs: A: Branch partially covered in ivy has west-facing cavity. B: East-facing cavity at approximately 2 m. C: Desiccated branch with east-facing cavity attached to north leading branch.		Moderate.	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T85	A middle aged pedunculate oak tree situated with the field boundary hedgerow (H21). SJ 38441 51086. PRFs: A: Multiple potential upward facing cavities visible due to decayed branch. B: Knot hole on western aspect of central branch at approximately 6 – 7 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T86	A mature pedunculate oak tree situated within central field boundary hedgerow H14). SJ 38105 51040. PRFs: A: Thick ivy cladding obscuring view of tree. Thick branches creating potential roosting pockets on southern aspect at chest height. B: Longitudinal crack on north aspect at approximately 2 m. Endoscope revealed that cavity runs deep.		Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Aerial climb should not be undertaken where there is potential to injure bats roosting under ivy.
T87	A middle-aged goat willow with no obvious defects situated partially within a pond (P3 from Ecological Assessment 9134.001). SJ 38097 51123. No PRFs visible during GLTA.		Negligible	N/A

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T88	A mature pedunculate oak situated within the north-western field. SJ 38201 51204. PRFs: A: Lifted bark around pruning cut.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T89	A middle age pedunculate oak tree situated within the north-western field. SJ 38214 51178. PRFs: A: Tear out on southern aspect of main stem with numerous potential cavities. B: Lifted bark/hazard beam on western aspect.		Moderate	Aerial/ladder climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T90	A mature pedunculate oak tree situated within the north-western field. SJ 38222 51164. PRFs: A: Two knot holes on south-west aspect branch at approximately 8 m. B: pruning cut on north-east aspect at approximately 2 m. C: Knot hole on north aspect at approximately 2m high.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T91	A middle age pedunculate oak situated within the north-western field. SJ 38227 51155 PRFs: A: Desiccation fissure on north-east aspect at approximately 4 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T92	A middle age pedunculate oak tree situated within the hedgerow (H16). SJ 38379 51177. No PRFs visible during GLTA.		Negligible.	N/A
T93	A mature crack willow situated within the residential property garden. SJ 38282 51256. No PRFs visible during GLTA.		Negligible.	N/A

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T94	A mature willow tree situated within the residential property garden. No PRFs visible. SJ 38293 51251. No PRFs visible during GLTA.	Negligible.	N/A
T95	A middle age common ash tree situated within the residential boundary. SJ 38328 51253. No PRFs visible during GLTA.	Negligible	N/A
T96	A mature pedunculate oak tree situated within the residential/field boundary hedgerow (H16) with large tree house. SJ 38327 51261. Ivy cladding may be obscuring additional features, but does not provide suitable PRF itself. PRFs: A: Heavily ivy clad, potentially hiding features within remnants of tree house. B: Desiccated south-east facing branch with cavity at approximately 4 m.	 Moderate.	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T97	A mature pedunculate oak tree, sparsely clad with ivy, situated within the northern boundary hedgerow (H19). Ivy does not provide suitable PRF itself, but may be obscuring other PRFs. SJ 38334 51272. PRFs: A: Transverse snap/hazard beam, south-east aspect at approximately 5 m. B: Desiccated limb with ram's horns, and other features. South facing at approximately 6 m. C: Desiccated limb with potential cavities. North facing at 5 m.	 Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T98	A middle age, ivy-clad pedunculate oak within northern boundary hedgerow (H19). SJ 38358 51280. PRFs: A: Large cavity at top of stem in canopy. B: Two knot holes adjacent to each other at branch fork near top of canopy at approximately 10 m. Adjacent branch to this, snapped branch resting on fork creating potential feature. C: Large cavity/wound running up main stem from approximately 1 m to 4 m, on eastern aspect. D: West facing branch at approximately 4 m has snapped, leaving a potential cavity in the exposed pith – unclear from ground level.		High Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August. Health and safety: Tree unsuitable to climb to due hollow stem.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T99	A middle age common ash tree situated in the northern boundary hedgerow (H19). SJ 38364 51284. PRFs: A: Severe split running up entire main stem on north and south aspect, multiple PRFs throughout. . 	High	Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August. Health and safety: Unsuitable to climb due to amount of deadwood present.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T100	A mature pedunculate oak tree situated within the hedgerow (H22). SJ 38499 51125. PRFs A: South leading branch has desiccated limb with associated downward facing cavity just above the top of hedgerow at approximately 3m. B: Knot hole visible on west aspect at approximately 7 m. C: North leading stem has desiccated features with cavity. Cluttered entrance due to hedgerow vegetation. D: Tear out on south-east aspect within upper canopy at approximately 8 m. E: Woodpecker hole on east aspect at approximately 6. F: Cavity on north-leading branch, located where branch meets main stem at approximately 4 m. Visible from eastern aspect. G: Same branch as PRF E. Desiccated limb with ram's horns. Visible from eastern aspect at approximately 8 m.	 High	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T101	A veteran pedunculate oak tree closely associated with group of trees G13. SJ 38470 51133. PRFs: A: Large cavity on northern aspect from base of main stem running upwards. Additional access points on western aspect. Very open and exposed but contains associated desiccation fissures suitable for crevice dwelling species. B: Branch overhanging water on eastern aspect has transverse snap with suitable features. C: Tear out on limb attached to north-west leading branch.		High	Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August. Health and safety: Not suitable for aerial climb due to hollow stem.
T102	A mature pedunculate oak tree situated within the hedgerow (H22). SJ 38468 51175. PRFs: A: Transverse snap on south-west aspect at approximately 8 m. B: Lifted bark and cavities around pruning cut on south-west facing branch at approximately 6 m. C: Woodpecker hole visible from eastern side of hedgerow on main north-leading branch that forks east. PRF at approximately 9 m. D: Longitudinal crack desiccated branch with wound at base, north leading branch within eastern canopy at approximately 5 m.		High	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T103	A mature pedunculate oak tree situated within the hedgerow (H22). SJ 38453 51196. PRFs: A: Large desiccated branch that forks from main stem at 2 – 3 m with multiple cavities from large tear out. B: Woodpecker hole on southern aspect at approximately 8 m. C: Possible hazard beam within mid canopy on eastern most upright branch, approximately 1 m above woodpecker hole (B). D: Possible hazard beam with potential cavity on southernmost branch, at approximately 6.5 m.		High	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.
T104	A mature pedunculate oak tree situated within the hedgerow (H22). SJ 38445 51208. PRFs: A: Wound on desiccated branch on south-west aspect at approximately 8 m. B: Knot hole forming at base of desiccated central south-west leading branch at approximately 4 m. C: Knot hole on southern aspect at base of desiccated branch at approximately 8 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T105	A mature pedunculate oak tree situated within the hedgerow (H22). SJ 38439 51221. PRFs: A: Main stem cavity below fork on southern aspect at approximately 2 m. B: Knot hole adjacent to where four branches fork. Northwest aspect of western limb at approximately 7 m. C: Two knot holes in proximity southern aspect of west leading limb, one approximately 0.5 m above the other. D: Multiple large cavities present due to recent large failure/tear out in western mid canopy. At approximately 4 -5 m.	 High	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.

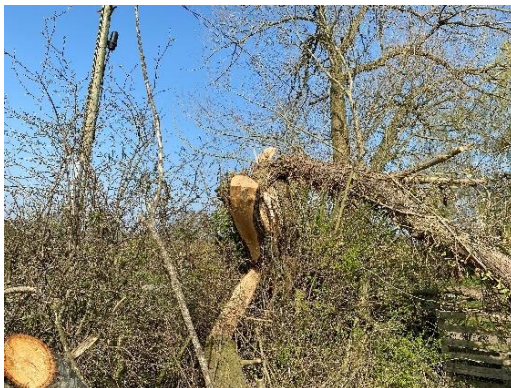
Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T106	A middle age pedunculate oak tree immediately adjacent to T107. SJ 38471 51262. PRFs: A: Branch cavity on north-west aspect at approximately 8 m. B: Two knot holes on south-facing desiccated branch at approximately 3 m.	 Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

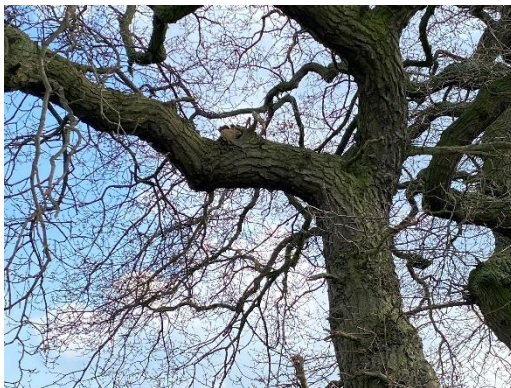
Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T107	A middle age pedunculate oak tree situated within the hedgerow (H20). SJ 38479 51264. PRFs: A: Wound at 1.5 m on southern aspect. Unable to inspect due to wasps' nest in feature. B: Dead branch with cavities on southern aspect at approximately 6 m. C: Longitudinal crack on southern aspect at approximately 6 m. D: Desiccated branch with dropped section on western aspect. E: Woodpecker hole on dead branch on western aspect at approximately 8 m. F: Hazard beam on northern aspect at approximately 6 m. G: Desiccation fissure on desiccated branch on northern aspect at approximately 6 m.	 High	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August. Health and safety: Wasps' nest present at the time of ground-based assessment in feature A.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T108	A middle age pedunculate oak tree situated within the hedgerow (H20). SJ 38525 51288. PRFs: A: Lifted bark on desiccated branch on south-eastern aspect at approximately 5 m high. B: Lifted bark on desiccated branch on southern aspect at approximately 6 m high.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
T109	A large mature pedunculate oak tree situated in the hedgerow (H20). SJ 38513 51309. PRFs: A: Large tear out on south-west aspect at approximately 8 m, appears to provide access internally. B: Cavity formed due to dropped branch on southern aspect at approximately 2 m. C: Cavity formed due to dropped branch on northern aspect at approximately 7 m. D: Lifted bark and cavities located on southern aspect branch at approximately 5 m. E: Transverse snap or broken branch on western aspect at approximately 5 m.		High	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T110	A middle aged pedunculate oak situated within a hedgerow. SJ 38492 51335. No PRFs visible during GTLA.		Negligible	N/A
T111	Large mature pedunculate oak tree situated within the field boundary hedgerow (H23). SJ 38537 51374. PRFs: A: Knot hole and desiccated branch on northern aspect at approximately 6 m. B: Tear out on southern aspect with associated desiccation fissure and cavities.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.
T112	A middle aged pedunculate oak tree situated within the field boundary hedgerow SJ 38501 51350. PRFs: A: Tear out with associated desiccation fissure and lifted bark on southern aspect at approximately 3.5 m. B: East facing knot hole visible from southern aspect at approximately 4 m.		Moderate	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T113	A large mature pedunculate oak tree growing out of ditch within field boundary. SJ 38612 51416. PRFs: A: Knot hole visible on eastern aspect at approximately 6 m. B: Desiccation fissure on east leading branch at approximately 5 m. C: Knot hole and bark damage on northern aspect at approximately 6 m. D: Upward facing cavity on east leading branch. E: Knot hole and desiccated branch on southern aspect.		Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation.
T114	A middle aged pedunculate oak situated within G10. SJ 38321 51086. No PRFs visible during GTLA.		Negligible	N/A
T115	Failed white willow with newer regrowth. The twisted, cracked, and shattered remnants of the old tree provide numerous PRFs throughout. SJ 38111 51210. Too many features to adequately inspect and regrowth prevents access.		Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: Hi vis PPE required due to roadside.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T116	A mature pedunculate oak tree with large tear out/failure that has fallen over the pond. Situated adjacent to the G10 group of trees. SJ 38303 51085. PRFs: A: Tear out on southern aspect, at approximately 2 m. Endoscoped during GLTA. No evidence of bats, however, feature offers moderate potential. B: Tear out (as above) but detached section. Endoscoped during GLTA. No evidence of bats, however, feature offers low potential.		Moderate Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Unsuitable to climb due to health and safety.
T117	A middle age pedunculate oak tree growing out of pond/waterlogged area. SJ 38313 51088. No visible PRFs.	Negligible	N/A
T118	A recently failed/fallen mature crack willow within hedgerow associated with residential boundary. Debris within adjacent field. SJ 38277 51253. PRF features: Present throughout due to tears/splits but limited value due to exposure. Conditions are suitable for opportunistic use only.		Low No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.

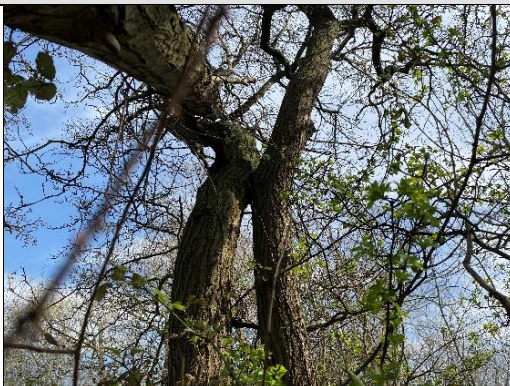
Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
T119	A middle age pedunculate oak tree. SJ 38493 51135. Difficult to assess due to dense vegetation and presence of water. Visibility from eastern aspect only. No PRFs seen from eastern aspect. Assessed on a precautionary basis.	No photo available.	Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist
T120	A mature pedunculate oak tree situated outside of the red line boundary within the roadside hedgerow. SJ 38940 50853. Tree was only viewable from roadside due to access constraints. Contains multiple PRFs.	No photo available.	Moderate	It is anticipated that impacts to this tree from the development will be negligible as it is outside of the red line boundary and separated by a road. Therefore, no further surveys will be required.
G1.1	Middle age pedunculate oak tree situated within hedgerow within a group of similar four trees. First tree within the group, from the south. SJ 38877 51290. No visible PRFs.		Negligible	N/A
G1.2	Middle age pedunculate oak tree situated within hedgerow within a group of similar four trees. Second tree within the group, from the south. SJ 38876 51295. A: Pruning cut cavity between heartwood and bark visible from western aspect at approximately 6 m.		Low.	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
G1.3	Middle age pedunculate oak tree situated within hedgerow within a group of similar four trees. Third tree within the group, from the south. SJ 38875 51302. No visible PRFs.		Negligible	N/A

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
G1.4	Middle age pedunculate oak tree situated within hedgerow within a group of similar four trees. Fourth tree within the group, starting from the south. SJ 38874 51306. Large cavity visible from western aspect at approximately 1 m. Endoscopy revealed the cavity extends high into the stem.		High	Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.
G2	Dense group of multi-stemmed goat willow trees situated within pond. SJ 38833 51361. No visible PRFs.		Negligible	N/A
G3	A pair of pedunculate oak trees situated in hedgerow forming a single crown. SJ 38858 51395. No visible PRFs.		Negligible	N/A
G4.1	A middle aged pedunculate oak. First tree in the group starting from the north. SJ 38680 51361. No visible PRFs.		Negligible	N/A

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
G4.2	A middle aged pedunculate oak. Second tree in the group starting from the north. SJ 38683 51357 PRFs: A: Knot hole visible from west aspect at approximately 3.5 m. B: Woodpecker hole on southern aspect.		High	Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.
G4.3	A middle aged pedunculate oak Third tree in the group starting from the north. SJ 38683 51357. No visible PRFs.		Negligible	N/A
G5.1	A middle age pedunculate oak tree in a group of four trees. First tree counting from the north. SJ 38725 51288. No visible PRFs.		Negligible	N/A

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
G5.2	A middle age pedunculate oak tree in a group of four trees. Second tree counting from the north. SJ 38731 51277. PRFs: A: Tear out visible from eastern aspect offering some limited opportunities. Downward facing feature. 	Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
G5.3	A middle age pedunculate oak tree in a group of four trees. Third tree counting from the north. SJ 38684 51352. No visible PRFs.	Negligible	N/A
G5.4	A middle age pedunculate oak tree in a group of four trees. Fourth tree counting from the north. SJ 38690 51344. No visible PRFs.	Negligible	N/A
G6	Mixed group of common hawthorn, common ash and goat willow with scrubby appearance. SJ 38710 50861. No visible PRFs.	Negligible	N/A
G7	Small Leyland cypress trees planted along residential frontage. No potential roosting features. SJ 38478 50868. No visible PRFs.	Negligible	N/A
G8	Lawson cypress trees used for screening of adjacent residential property. No visible PRFs. SJ 38022 51049.	Negligible	N/A
G9	A group of Leyland cypress trees situated within the adjacent residential garden at the north-west corner of the site. SJ 38015 51138. No visible PRFs.	Negligible	N/A

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
G10.1	Willow tree overhanging pond with multiple PRFs visible with features potentially suited to high value roosts. SJ 38331 51079. PRFs: A: Large longitudinal crack in main stem which is hollowed out. 	High	Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August. Health and safety: Close inspection not possible due to water. Aerial climb not recommended due to health and safety..
G10.2	Partially fallen willow tree with hollowed out stem at base adjacent to pond. SJ 38333 51085. PRFs: A: Downward facing longitudinal crack in stem, would provide opportunistic roosting habitat. 	Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.

Tree ID	Description and PRF Characteristics		Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
G10.3	A multi-stem willow tree within scrub area adjacent to pond. SJ 383319 51086. PRF: A: Compression fork where two stems meet may offer limited roosting potential.		Low	No further surveys required. Precautionary soft felling/pruning measures must be adhered to under supervision of a licenced bat ecologist.
G10.4	A mature pedunculate oak tree situated within the group of trees within scrub area near to pond. SJ 38317 51087. PRFs: A: PRFs consisting of fluting at waist height on the southern aspect of the main stem. Attempted endoscope survey during GLTA but unsuccessful.		Moderate	Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Aerial climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Health and safety: Adjacent to water.

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
G10.5	A willow tree growing out of the pond/waterlogged area. Approximately situated at SJ 38325 51095. PRFs: A: Longitudinal crack visible on western aspect. Unable to inspect closely due to water.		Moderate. Two separate survey visits. Including one dusk emergence survey and a separate dawn re-entry survey, undertaken between May to September with at least one survey undertaken between May to August. Health and safety: Aerial climb unsuitable due to water.
G11.1	Apple tree within group of trees within residential garden, adjacent to building B10. SJ 38310 51217. PRFs: A: Pruning cut or failed main stem and woodpecker hole below on southern aspect.		High Ladder climb and endoscopic inspection also possible to further assess PRFs and tree categorisation. Three separate survey visits. Including at least one dusk emergence survey and a separate dawn re-entry survey (the third visit being either a dusk emergence or dawn re-entry survey) undertaken between May to September with at least two surveys undertaken between May to August.
G12	Mixed group of fruit and ornamental trees. SJ 38320 51257. No visible PRFs.	Negligible	N/A

Tree ID	Description and PRF Characteristics	Roost Suitability based on ground-based assessment	Recommendations if tree is to be impacted
G13	Mixed group of blackthorn, pedunculate oak, and goat willow with scrubby appearance. SJ 38480 51141. No PRFs visible.	Negligible	N/A

Table 6: Summary of GLTA

High	T4, T17, T19, T56, T75, T98, T99, T100, T101, T102, T103, T105, T107, T109, G1.4, G4.2, G10.1, G11.1
Moderate	T5, T6, T7, T8, T11, T12, T13, T14, T15, T25, T28, T29, T30, T31, T33, T36, T39, T40, T41, T42, T44, T45, T46, T47, T48, T49, T50, T52, T54, T59, T62, T64, T69, T70, T74, T76, T77, T79, T81, T84, T85, T86, T89, T90, T91, T96, T97, T104, T106, T111, T112, T113, T115, T116, T120, G10.4, G10.5
Low	T1, T9, T16, T18, T23, T53, T61, T67, T71, T73, T78, T88, T108, T118, T119, G1.2, G5.2, G10.2, G10.3
Negligible	T2, T3, T10, T20, T21, T22, T24, T26, T27, T32, T34, T35, T37, T38, T43, T51, T55, T57, T58, T60, T63, T65, T66, T68, T72, T80, T82, T83, T87, T92, T93, T94, T95, T110, T114, T117, G1.1, G1.3, G2, G3, G4.1, G4.3, G5.1, G5.3, G5.4, G6, G7, G8, G9, G12, G13.

Aerial Assessment of Trees

- 3.10 An aerial assessment was undertaken of the majority of trees on site with moderate or high suitability for roosting bats confirmed by the ground level tree assessment, that will also require removal to facilitate development. Tree descriptions and roost suitability categorisations following the aerial assessment are detailed in Appendix A and summarised in Table 7 below. A number of trees could not be assessed by aerial inspection due to health and safety or could not be fully inspected due to access. Trees that could not be climbed are evaluated by the ground level tree assessment results and categorisation, summarised in Table 8.

Table 7: Summary of Aerial Assessments

High	T45, T47, T56, T101, T107, G4.2
Moderate	T41, T44, T50, T75, T86, G10.4
Low	T40, T46, T48, T54, T62, T79, T116, G10.1, G10.5
Negligible	T39, T42, T49, T52, T59, T64, T74, T76, T77, T81, T85, T89, T90, T91, T106, T109, G11.1,

4.0 Conclusions

Buildings

- 4.1 Two activity surveys were undertaken on buildings B1 and B8, which were assessed to have moderate potential, and a single activity survey was undertaken on each of the buildings assessed as having low potential (B3, B6, B7, and B13). No roosts were present during any of the surveys. All other buildings were assessed as having negligible suitability for roosting and were not subject to activity surveys.
- 4.2 Although no bats were identified roosting within the buildings, there will be a loss of potential roosting features that the building provides. As such, measures will be taken to mitigate the loss of suitable roost features.
- 4.3 Bats are dynamic and use different roosting sites throughout the year. Demolition of the buildings should be undertaken in winter (November to March), when bats are least likely to be present. If demolition is proposed outside of this period then the implementation of a Precautionary Working Method Statement will be required, including a pre-commencement check of the building by a licensed bat consultant. Removal of potential roost features by hand may also be required. If a bat roost is identified within the building during the works, then works must cease until a Natural Resources Wales bat licence is obtained.
- 4.4 Due to suitable access and nesting features, all buildings will require works to be undertaken outside of the core bird nesting season (March – August, inclusive) or be subject to pre-commencement check by an ecologist prior to works commencing.

Trees

- 4.5 Table 8 below summarises the results following the GLTA and the aerial assessments for trees on site that will be unavoidably lost due to development. In some cases, the suitability of the trees was re-assessed and changed following the aerial assessment. There are 77 trees within the site with suitability for roosting bats. 16 have high suitability, 33 having moderate suitability and 28 have low suitability for roosting bats.

Table 8: Summary of GLTA and Aerial Assessments

High	T4, T17, T19, T45, T47, T56, T98, T99, T100, T101, T102, T103, T105, T107, G1.4, G4.2
Moderate	T5, T6, T7, T8, T11, T12, T13, T14, T15, T25, T28, T29, T30, T31, T33, T36, T41, T44, T50, T69, T70, T75, T84, T86, T96, T97, T104, T111, T112, T113, T115, T120, G10.4
Low	T1, T9, T16, T18, T23, T40, T46, T48, T53, T54, T61, T62, T67, T71, T73, T78, T79, T88, T108, T116, T118, T119, G1.2, G5.2, G10.1, G10.2, G10.3, G10.5
Negligible	T2, T3, T10, T20, T21, T22, T24, T26, T27, T32, T34, T35, T37, T38, T39, T42, T43, T49, T51, T52, T55, T57, T58, T59, T60, T63, T64, T65, T66, T68, T72, T74, T76, T77, T80, T81, T82, T83, T85, T87, T89, T90, T91, T92, T93, T94, T95, T106, T109, T110, T114, T117, G1.1, G1.3, G2, G3, G4.1, G4.3, G5.1, G5.3, G5.4, G6, G7, G8, G9, G11.1, G12, G13.

- 4.6 Trees with high and moderate suitability that will be unavoidably impacted by the proposed development require additional survey effort in the form of nocturnal roost surveys. This includes indirect impacts such as lighting. Any tree with low suitability that will be unavoidably impacted by development proposals will be subject to Precautionary Working Measures (PWMs) during removal or pruning works.
- 4.7 The impacts of the proposed development and proposed mitigation are assessed in the accompanying ES Chapter (TEP Report Ref: 9134.011).

Further Recommendations

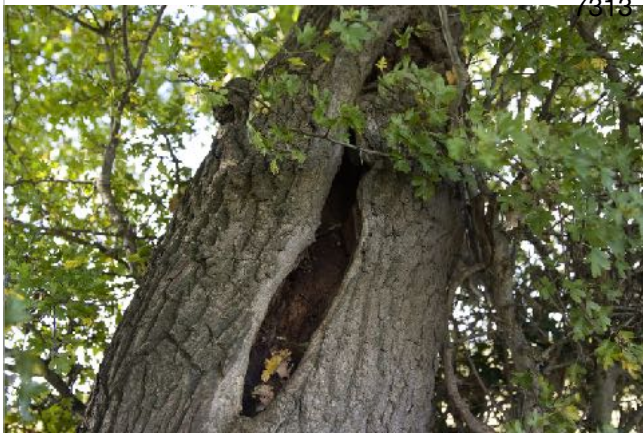
- 4.8 A sensitive lighting strategy will be implemented as part of the scheme to avoid indirect impacts of lighting on nocturnal and crepuscular species, on retained and created habitats identified as important commuting/ foraging routes for bats. There are four key lighting design principles:
- Use of unnecessary lighting will be avoided;
 - Spatial spread of lighting – the horizontal and vertical spread of artificial light will be minimised and take into account for both primary and reflected light sources. Directional lighting can be achieved by angle and orientation of beam, use of a cowl, louvre or other light shield, or a combination of these;
 - Timing and duration of lighting – timers and bespoke dimming regimes may be used to ensure that luminaires are reduced at times of predicted low use. These can be set to change with the seasons and therefore reflect the shifting time of dusk and dawn throughout the year. Motion sensors provide further control to ensure that areas are illuminated only when required;
 - Intensity and colour of lighting – light intensity will be as low as possible whilst meeting the objectives of the intended function. The colour of lighting will need to take into account the sensitivity of the ecological receptors on site. Light sources selected should emit zero ultra-violet light whenever possible. Interim guidance from the Bat Conservation Trust (2014) recommends that white and blue spectrum light should be avoided or, where white lights are required, these should be of warm/neutral colour and have a peak wavelength above 550 nanometers. Narrow spectrum light sources should be used (to lower the range of species affected by lighting).
- 4.9 Details of the proposed lighting scheme can be secured by way of an appropriately worded planning condition.
- 4.10 Installation of bat boxes within the building design and / or retained trees will mitigate the loss of roosting opportunities caused by the proposals. The bat boxes should be targeted for those species known to occur in the surrounding area i.e. pipistrelle species, such as the Schwegler 2FN bat box for retained trees or the Beaumaris bat box to be placed on a new building. The Ibstock enclosed bat box C can be built into a building during construction. The boxes should be placed at least 2.5m high and should be south or west facing, close to retained or replacement foraging habitats such as the hedgerow in the west of site.

- 4.11 Details of the specification and location of bat boxes can be secured by way of an appropriately worded planning condition.
- 4.12 The habitats on site offers suitability for foraging and commuting bats in the form of scattered trees and the boundary hedgerows. The impacts of the proposed development and proposed mitigation are assessed in the accompanying ES Chapter (TEP Report Ref: 9134.011).

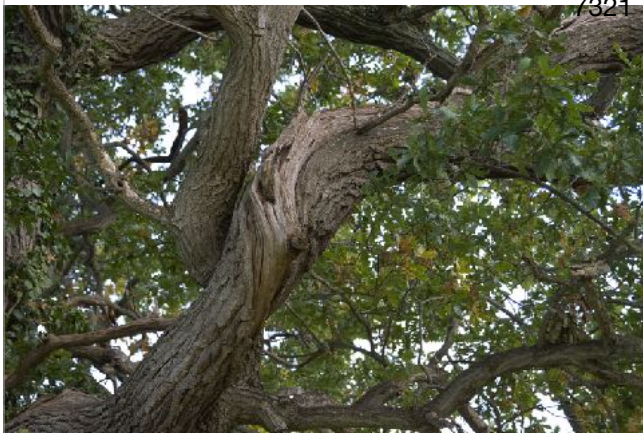
APPENDIX A: Aerial Assessment Results 2022

TEP - Bryn Lane Wrexham - Aerial Inspection 2022

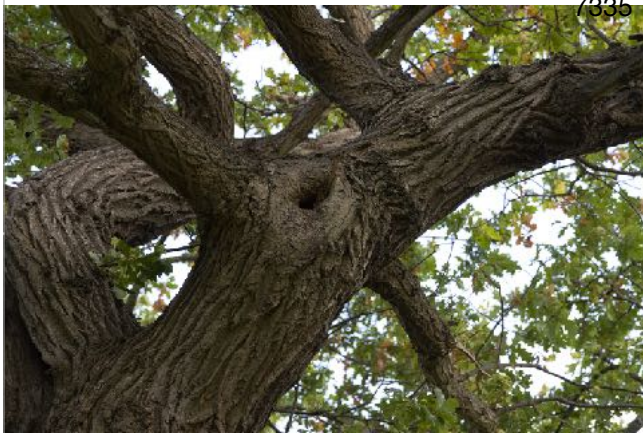
Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T39	Oak	10	70	 7311	Mature oak tree in field hedgerow boundary. Light ivy clad from base to 8m, deadwood in crown		Yes	Negligible	No
T39.1	PRF1	All	All	 7312	Light ivy cladding from ground to 8m right against the bark. Does not provide suitable roosting feature at present. Is not obscuring any other PRFS	Ivy does not make PRF	Yes	Negligible	No
T40	Oak	12	1.2	 7315	Mature oak tree in field hedgerow boundary. Deadwood in the crown.		Yes	Low	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T40.1	PRF1	2m	E	 7313	Tear out on North leading limb visible on the eastern aspect at 2m. 1m x 7cm entrance with 10cm of downward travel and 10cm upward travel. Dry inside, more suitable to nesting birds.	Use torch to check before felling	Yes	Low	No
T40.2	PRF2	4m	N	 7314	Pruning wound at 4m with small cavity at base. Entrance is 10cm x 5cm. 10cm of upwards travel into rotting deadwood. Open to the elements	Use torch to check before felling	Yes	Low	No
T41	Oak	9	60	 7317	Middle aged oak tree in field hedgerow boundary. Significant deadwood with the crown and ivy clad from base to 6m. Heavy foliage at base of tree		No	Moderate	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T41.1	PRF1	1m	N	 7318	Tear out with main stem cavity from 1m to 6m. Entrance 1m x 7cm with more than 1m of upward travel. The cavity itself is approx 10cm wide, open at top. Leaf debris and twigs (nesting birds/squirrels) at base.	Check prior to felling	No	Moderate	Yes
T41.2	PRF2	Base to 6m	All	 7319	Ivy clad from base to 6m. At 4m ivy is thick and has slight come away from the tree creating PRF. Also obscures other entrances into main stem cavity.	Check prior to felling	Yes	Low	No
T42	Oak	12	90	 7320	Mature oak tree in field hedgerow boundary. Some deadwood in crown. Heavily foliage at base and very light ivy clad.	Ivy does not make PRF	Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T42.1	PRF1	3m	W	7321 	Exposed heartwood throughout whole of southern limb. 4m in length. Callus is tight to the exposed heartwood and creates no cavity.		Yes	Negligible	No
T44	Oak	8	90	7327 	Middle aged oak tree in field hedgerow boundary. Main stem cavity from ground to top. Heavy foliage at base. Ivy clad from ground to 7m		No	Moderate	Yes
T44.1	PRF1	1m	S	7328 	Main stem cavity at base of tree. Entrance 1m x 30cm with more than 1m of upward travel. Cavity dimensions are 50cm wide tapering down to 30cm. Entrance obscured by barbed wire fence. Dry and smooth inside. Open to predators. Nesting bird material	Suitable for single bats day roost.	No	Moderate	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T44.2	PRF2	All	All	 7329	Moderate ivy clad through the crown. Some ivy starting to come away. Possible small cavities for single bats behind ivy. Can be checked with torch.	Check with torch before felling	Yes	Low	No
T45	Oak	11	70	 7330	Mature oak tree in field hedgerow boundary. Large lightening struck tree with scorch marks. Exposed heart wood with complex main stem cavity		No	High	Yes
T45.1	PRF1	1m	E	 7332	Lightening strike on eastern aspect. Entrance 4m x 40cm leading to an upward cavity with more than 1m of upward travel. Dry inside. Cavity is 40cm wide through. More suitable to nesting birds. Looks to be open above.	cannot be fully inspected with endoscope due to size of cavities	No	Moderate	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T45.2	PRF2	5m	W	 7335	Knot hole on the western aspect. Entrance 7cm x 5cm. Leads into a cavity 15cm wide with more than 1m of downward travel linking up to PRF1. Cavity could not be fully inspected due to nesting squirrel inside cavity at time of survey.	cannot be fully inspected with endoscope due to size of cavities	No	Moderate	Yes
T45.3	PRF3	5m	W	 7336	Continuation of lightning strike from PRF1 on the western aspect. Entrance 1m x 7cm. Multiple cavities with more than 1m of upward, downward and horizontal travel into multiple limbs. Cavity is 10cm wide inside.	cannot be fully inspected with endoscope due to size of cavities	No	High	Yes
T46	Oak	7	50		Oak tree in field hedgerow boundary. Heavy foliage of black thorns and hawthorn to base. Main stem cavity.		Yes	Low	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T46.1	PRF1	2	SW	7341 / 7342 / 7343 	Multiple features on main stem cavity. Rot holes at 2, 3 and 4m. All cavities lead into main stem. More than 1m of travel. Open to elements and predators. Suitable for night roost. More suitable to nesting birds.	Open to elements and predators.	Yes	Low	No
T47	Oak	8	40	1813 	Mature oak tree in field hedgerow boundary with knot holes, dead, and failed limbs in the crown.		Yes	High	Yes
T47.1	PRF1	3	S	1814 	Knot hole at 4m on the south side of the main stem, 10cm diameter entrance into main stem cavity with >50cm of upward travel. Packed with nesting materials at the base.		Yes	High	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T47.2	PRF2	5	S	 1815	Main stem cavity at 1m on the south side of main stem.		Yes	High	Yes
T48	Oak	6	30	 1810	Mature oak tree in field boundary hedgerow with dead and failed limbs in the crown, light ivy cover, missing bark, and exposed heartwood on the main stem.	Check crevices by torch before felling	Yes	Low	Yes
T48.1	PRF1	3	S	 1811	Rot holes at 3m on the south side of dead limb 10cm diameter entrance with 30cm upward travel to secondary entrance hole. Open from above, packed with nesting materials at base.	Check crevices by torch before felling	Yes	Low	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T48.2	PRF2	1	All	 1812	Ivy cover and missing bark on main stem with numerous minor pockets suitable for single bats.	Check crevices by torch before felling	Yes	Low	Yes
T49	Oak	10	70	 1808	Mature oak tree in field boundary hedgerow with dead and failed limbs in the crown.		Yes	Negligible	No
T49.1	PRF1	3	SW	 1809	Tear out on underside of horizontal limb at 3m, 50cm of exposed heartwood with no suitable cavities.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T50	Oak	8	70	 1807	Oak tree in field boundary hedgerow with loose and missing bark, dead and failed limbs, knot holes in main stem. Not safe to climb.	Not safe to climb.	No	Moderate	Yes
T52	Oak	8	70	 1805	Mature oak tree in field hedgerow boundary with knot holes, dead, and failed limbs in the crown. All features checked, none suitable for use by roosting bats.		Yes	Negligible	No
T52.1	PRF1			 1806	Failed major limb at 2m on east side of main stem with minor cavity at base, packed with nesting materials. Open to the elements, not suitable for use by roosting bats.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T54	Oak	5	30	 1804	Mature oak tree in field hedgerow boundary with dead branches in the crown and knot hole on north side of main stem n		Yes	Low	No
T54.1	PRF1	3	N	 1803	Healing tear out at 3m on north side of main stem, with 10cm x 5cm opening into 5cm deep dry cavity, potentially suitable for single or lower numbers of bats, but more likely to be used by nesting birds.		Yes	Low	No
T56	Oak	8	60	 1801	Mature oak tree in field hedgerow boundary with deadwood woodpecker holes, knot holes, and exposed heartwood in the crown.		Yes	High	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T56.1	PRF1	4	S	 1802	Woodpecker hole on south side of near horizontal limb. No upward travel. 70cm of downward travel in 10cm diameter dry and smooth cavity, packed with squirrel nesting materials at base.		Yes	High	Yes
T59	Oak	8	60	 1798	Mature oak tree in field hedgerow boundary with minor ivy cover on main stem and into lower crown, dead and rotting limbs, and knot holes in the crown.	No features suitable for use by roosting bats.	Yes	Negligible	No
T62	Oak	10	60	 1800	Mature oak tree in field hedgerow boundary with dead and failed limbs, knot holes, and tear outs in the crown.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T62.1	PRF1	4	SE	C4626 	Failed limb with exposed heartwood, splits, and rot hole on the underside. Opening on top of the limb has more than 50cm of downward travel which is packed with squirrel nesting materials. Open to the elements, wet, unlikely to support roosting bats.		Yes	Low	No
T64	Oak	5	40	1799 	Mature oak tree in field hedgerow boundary with dead and rotting limbs, tear outs, and knot holes in the crown.		Yes	Negligible	No
T64.1	PRF1	4	NE	C4625 	Tear out with dead wood on underside of near horizontal limb, minor cavity at base of deadwood <5cm, wet, open to the elements.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T74	Oak	10	70	 1672	Mature oak tree in field boundary hedgerow with ivy from base into crown, and dead and rotting limbs and knot holes. Ivy does not form a suitable roosting feature, and does not obscure other features. Dead and rotting branches and knot holes do not provide any suitable roosting features.			Negligible	No
T75	Oak	10	60	 1671	Mature oak tree in field hedgerow boundary with dead and rotting limbs and branches in the crown. Majority of features are not suitable for roosting bats. PRF1 below could not be fully checked as squirrel present, but could be suitable for roosting bats.		No	Moderate	Yes
T75.1	PRF1	6	N	 C4549	Tear out and rot hole with part of rotting limbs still present, at 6m on north side of crown. Callus rolls have partially closed the feature. Rot hole has approximately 30cm of upward travel. Currently in use by squirrel, could not be fully checked	Currently in use by squirrel.	No	Moderate	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T76	Oak	8	60	 1669	Mature oak tree in field boundary hedgerow with dead and failed limbs in the crown and splits, and missing bark on main stem.		Yes	Negligible	No
T76.1	PRF1	<3	N	 1670	Split on north side of main stem from base to 3m with exposed heartwood and minor splits in desiccated wood. Callus rolls are tight against heartwood with no suitable cavities present.		Yes	Negligible	No
T76.2	PRF3	3	S	 C4548	Rot hole on side of horizontal limb at 3m on south side of the crown. 10 x 2cm rot hole with minor cavities (<5cm) at either end.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T77	Oak	10	90	 1668	Mature oak tree in field boundary hedgerow with knot holes and dead branches in the crown.		Yes	Negligible	No
T77.1	PRF1	4	S	 C4546	Knot hole on end of horizontal limb on south side of canopy, 5cm diameter entrance with 7cm horizontal travel in dry tapering cavity.		Yes	Negligible	No
T77.2	PRF2	6	S	 C4547	Upward facing knot hole at 6m on south side of main stem, 10cm diameter entrance with <10cm of downward travel.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T79	Oak	8	80	 1675	Mature oak tree in field with dead and rotting limbs in the crown.	Check feature prior to felling.	Yes	Low	No
T79.1	PRF1	2	NE	 1676	Dead and rotting limb with missing bark, and rot hole at base close to main stem. 5cm diameter entrance hole with <10cm downward travel into dry cavity, with squirrel fur inside.	Check prior to felling	Yes	Low	No
T81	Oak	10	80	 1667	Mature oak tree in field hedgerow boundary with dead branches, pruning cuts, and light ivy in the crown.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T81.1	PRF1	5	N	C4544 	Split bark with minor exposed heartwood on inside of diagonal limb. No suitable cavity.		Yes	Negligible	No
T81.2	PRF2	4	S	C4545 	Pruned limb on southern side of main stem at 4m, missing bark and exposed heartwood, but no suitable cavities.		Yes	Negligible	No
T85	Oak	10	60	1673 	Oak tree in field boundary hedgerow with dead and rotting branches in the crown, areas of exposed heartwood on top of limbs and knot holes in limbs.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T85.1	PRF1	7	W	C4551	Knot hole at 7m on west side of vertical limb. 7cm diameter entrance with no upward travel and <5cm downward travel in tapering cavity. Open to the elements, not suitable for roosting bats.		Yes	Negligible	No
T86	Oak	8	90	1664	Mature oak on field boundary hedgerow dead branches and limbs in the crown ivy from base to top of crown	Precautionary moderate as cannot be fully checked.		Moderate	
T86.1	PRF1	All	All	1666	Ivy from base to top of crown with pockets behind the thicker stems towards the base		Yes	Low	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T86.2	PRF2	2	N	 1666	Bees nest can not be fully checked, at least 10cm of downward travel. Horizontal travel can not be checked as to tight for endoscope	Will need to be fully endoscope when bees have left	No	Precautionary moderate	Yes
T89	Oak	8	60	 1659	Mature oak tree in line of four trees in field. With missing and failed limbs, exposed heartwood and dead branches in the crown.		Yes	Negligible	No
T89.1	PRF1	5	W	 C4541	Failed limb in centre of crown with branch still hanging and open splits. Open through the splits with no enclosed spaces. Cracks will change size as the limb moves in the wind.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T89.2	PRF2	4	W	C4542 	Missing bark and exposed heartwood on top of diagonal limb to west side of crown. Minor splits, callus rolls are tight against heartwood, minor cavity at top of feature, less than 5cm deep with no suitable shelter.		Yes	Negligible	No
T90	Oak	8	60	1660 	Mature oak tree in line of four trees in field, with dead limbs and branches in the crown, knot holes and pruning wounds on branches and the main stem.		Yes	Negligible	No
T90.1	PRF1	All	All	C4543 	Knot holes and pruning wounds on limbs on all aspects of the tree from 2m into the crown. All checked, none with cavities suitable for use by roosting bats.		Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T90.2	PRF2	4	NW	 1661	Pruning wound with exposed heartwood and small 3cm diameter rot hole with <5cm travel in open wet cavity.		Yes	Negligible	No
T91	Oak	8	50	 1663	Mature oak tree, southern tree in line of four trees in field, with dead limbs and branches in the crown, knot holes and pruning wounds on branches and the main stem. None with features suitable for use by roosting bats.	Dead branches have missing bark and minor splits in exposed heartwood, but none are suitable for roosting.	Yes	Negligible	No
T101	Oak	10	1.2	 1759	Mature oak tree adjacent pond with multiple dead, rotting, and hanging limbs in the crown, and a large main stem cavity. Not safe to climb as large dead limbs are hanging above features which need to be inspected.		No	High	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T101.1	PRF1	Base	N	1760 	Large open main stem cavity from base to which leads upward, open at base, enclosed above 3m, 40cm diameter cavity, with at least 1m of upward travel, could not be checked, but likely to be suitable for use by roosting bats.		No	High	Yes
T101.2	PRF2	5	W	C4576 	Tear out on west side of main stem with split above, 30 x 60cm of exposed heartwood with cavity potentially travelling upward, and possibly downward linking to PRF1.		No	High	Yes
T101.3	PRF3	5	W	C4577 	Tear out on west side of horizontal limb in the north of the crown. 40cm x 10cm with some deadwood inside, cavity potentially leads down the limb.		No	High	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T106	Oak	8	40	 1767	Oak tree in field boundary hedgerow with knot holes and dead branches in the crown.		Yes	Negligible	No
T106.1	PRF1	6	NW	 1768?	Tear out at 6m on the northwest side of vertical limb, no suitable cavity.		Yes	Negligible	No
T107	Oak	8	70	 1766	Oak tree in field boundary hedgerow with dead branches, knot holes, and tear outs in the crown. Not safe to climb as very active wasps nest at 1.5m on south side of main stem.	Not safe to climb.	No	High	Yes

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T109	Oak	16	2	1761	 A large, mature oak tree with a wide, spreading canopy, standing in a field. The tree has a thick trunk and many branches with green leaves. The ground in front is covered with dry grass.	Veteran oak tree in field boundary hedgerow with multiple failed limbs in the crown, knot holes, and deadwood. Dropped limbs and knot holes have areas of exposed heartwood and minor splits and cavities which are too small for use by roosting,neg bats.		Negligible	No
T109.1	PRF1	7	NW	C4578	 A close-up view of a tree trunk showing a large, irregular hole or cavity in the bark. The bark is light brown and peeling in places. The hole is deep and has a rough, uneven interior.	Tear out at 7m on west side of near- vertical limb in the northwest corner of the crown. 1m x 20cm of exposed heartwood with callus rolls on the sides. Callus rolls are tight against heartwood with only minor splits on right hand side, which are not large enough to be used by roosting bats. Minor gap at top of feature has no upward travel.	Yes	Negligible	No
T116	Oak	6	80	1752	 A tree trunk with a large, vertical cavity or hole, surrounded by dense foliage. The cavity is deep and has a rough, uneven interior. The surrounding foliage is green and dense.	Failed oak tree on pond boundary, majority of the tree has fallen into pond large cavity on main stem	Yes	Low	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
T116.1	PRF1	1	S	 1751	Limb failure on the south side of the tree with 2 meters exposed heartwood minor cavity within the heartwood 10cm of upward travel.		Yes	Low	No

TEP - Bryn Lane Wrexham - Aerial Inspection 2022

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
G4.2	Oak	8	30		7322 Middle aged oak tree in field hedgerow boundary. Deadwood, rot hole and woodpecker hole in main stem.	Not safe to climb due to wasps nest	No	High	Yes
G4.2.1	PRF	3	S		7326 Woodpecker hole at 3m on the southern aspect. Entrance 5cm x 5cm	Cannot be checked due to wasps nest in hole	No	High	Yes
G10.1	Willow	8	50		1755 Multi stem leaning willow in pond with tear out on north east side of leaving limb from base to 3 meters		Yes	Low	No

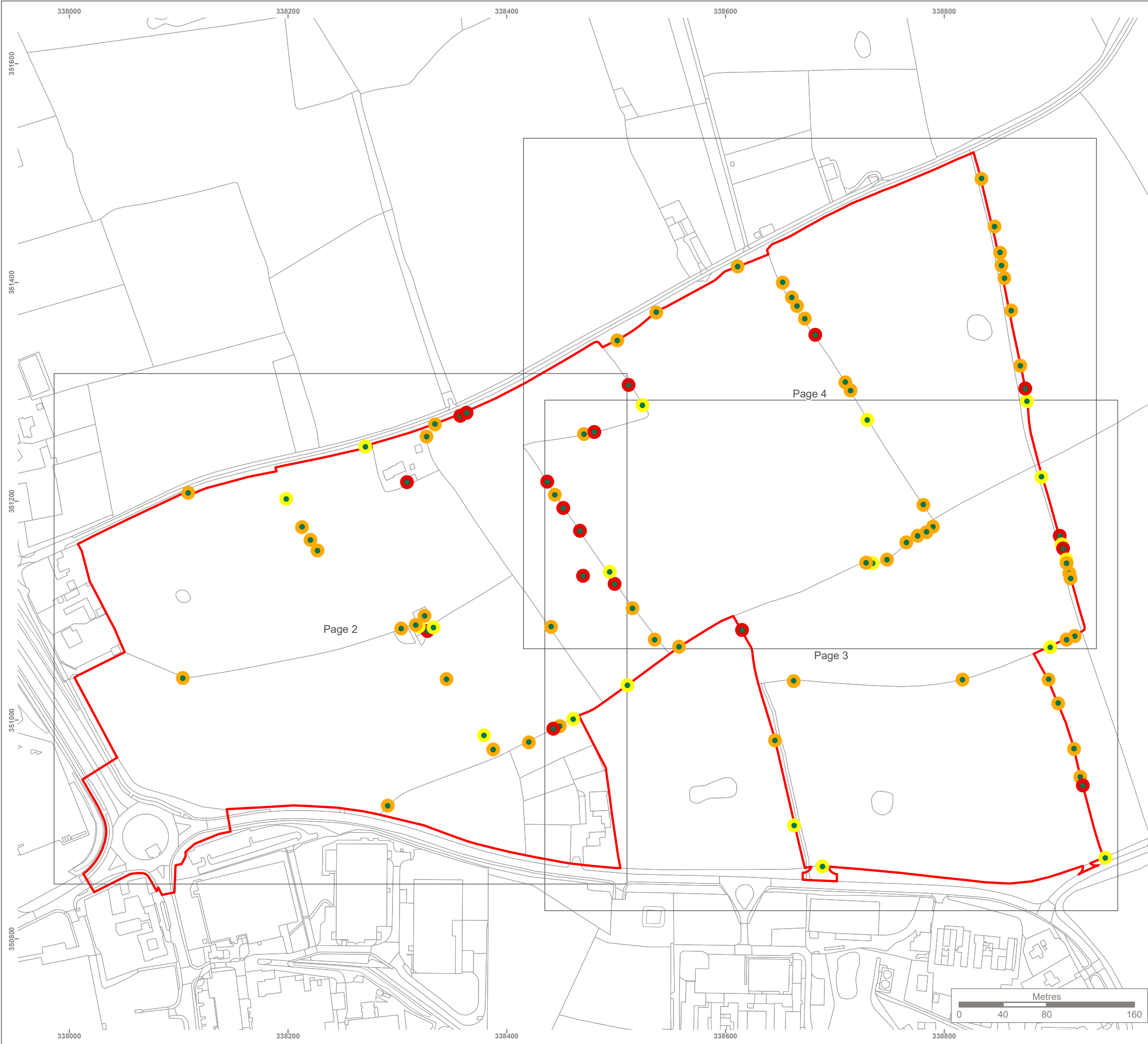
Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
G10.1.1	PRF1	Base to 3m	NE		1756 Tear out on north east side of leaning limb from base to 3m with 20cm of exposed heartwood. Callus rolls tight against heartwood and 10 enclosed cavities at the top of the feature. Open to the elements more suitable for nesting birds		Yes	Low	No
G10.4	Oak	10	50		1753 Oak tree on edge of pond with split in bark at 1m on south side of mai. Stem.		No	Moderate	Yes
G10.4.1	PRF1	1	S		1754 Split in bark at 1m on south side of main stem 10cm x 3cm with more than 30cm upward travel in dry smooth cavity, multiple chambers which can't be fully checked.	Likely to be more suitable for winter use than summer as entrance is cluttered and low to the ground.	No	Moderate	

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
G10.5	Willow	7	20	1757 	Multi stemmed willow in pond, with tear out on southern stem.	Check before felling.	Yes	Low	No
G10.5.1	PRF1			1758 	Tear out at 2m on west side of stem leaning south into the pond. 5cm x am of exposed heartwood with 2cm x 20cm cavity at top of feature. Packed with woodlice, dry and smooth inside.	Suitable for use by single or low numbers of bats.	Yes	Low	No
G11.1	Damson, not Apple	3	15	1657 	Damson tree in residential garden adjacent tin shed and field boundary hedgerow. Top has been cut off, revealing a main stem cavity with a woodpecker hole 40cm below the cut.	Open to the elements, no suitable shelter in main stem cavity or splits in bark on north side of main stem.	Yes	Negligible	No

Tree / feature number	Species	Height	DBH / Aspect	JPEG	Description	Comments	Can it be fully checked ?	Suitability	Further survey?
G11.1-1	PRF1	2.5	W		1658 Woodpecker hole at 2.5m on west side of main stem, 5cm diameter with 10cm downward travel in open cavity with 40cm upward travel to open top of stem.	Does not offer suitable shelter for roosting bats.	Yes	Negligible	No

DRAWINGS

Bat Ground Level Tree Assessment Results G9134.015.1-4A
Phase 1 Habitat Map G9134.007B
Building Location and Suitability Map G9134.031A
Surveyor Locations for Nocturnal Roost Surveys G9134.032A



KEY

- Site boundary
- Page and page number
- A34 Broad-leaved tree with low bat suitability
- A35 Broad-leaved tree with moderate bat suitability
- A36 Broad-leaved tree with high bat suitability

Note:
The locations of habitats and habitat features are indicative.

Reproduced by permission of Ordnance Survey on behalf of HMSO.
Contains OS data © Crown Copyright and database right 2023. All rights reserved.
Contains data from OS Zoomstack. Licence number 0100057890.

Site Map

1:100,000

A	Site boundary update	SP	AE	14/04/2023
Rev	Description	Drawn	Approved	Date

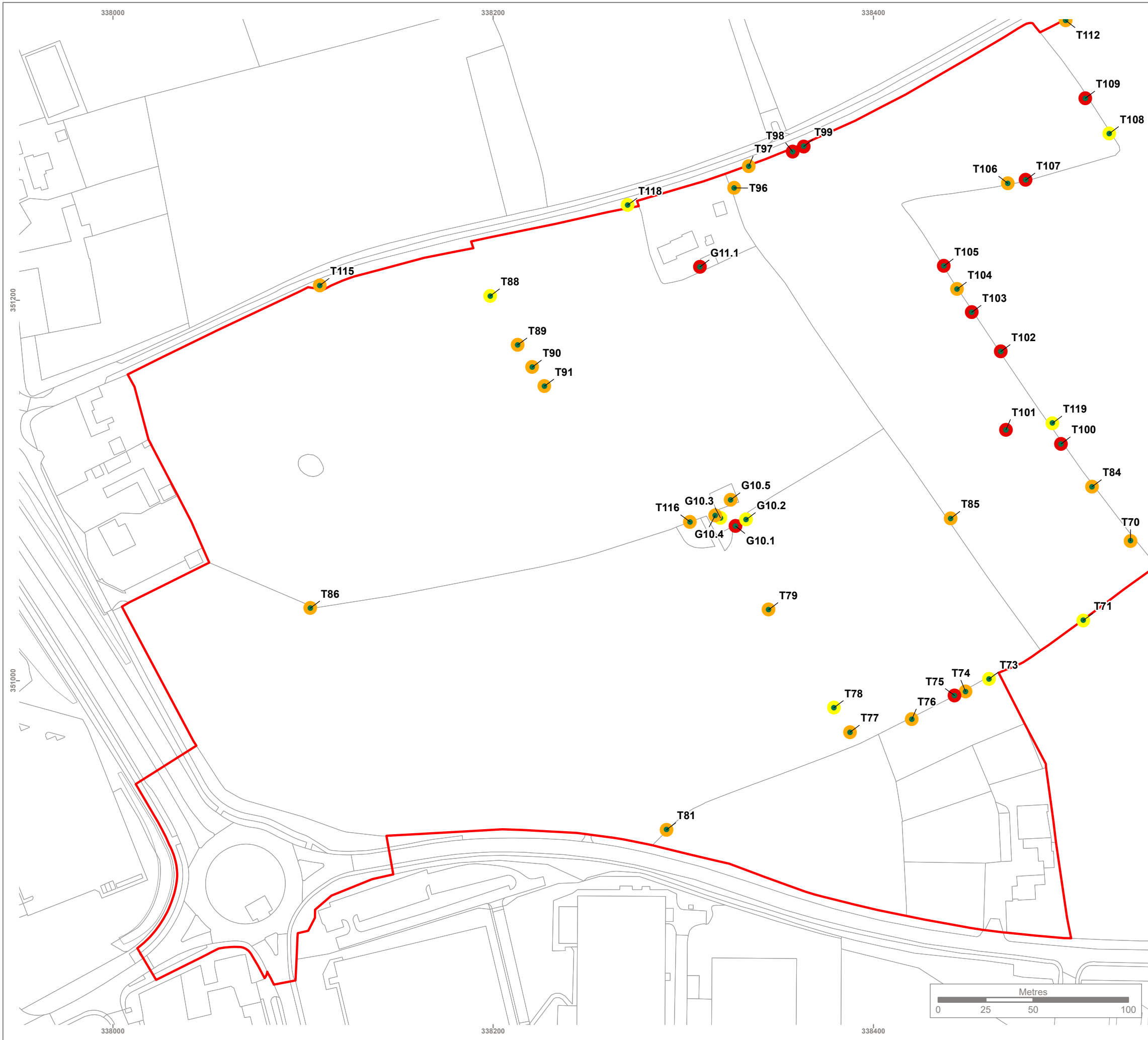
TWP | **THE ENVIRONMENT PARTNERSHIP**

Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Land North of Bryn Lane, Wrexham

Title
Bat Ground Level Tree Assessment Results

Drawing Number G9134.015.1 A				Page 1 of 4
Drawn BJ	Checked SA	Approved KG	Scale 1:3,500 @ A3	Date 12/06/2023

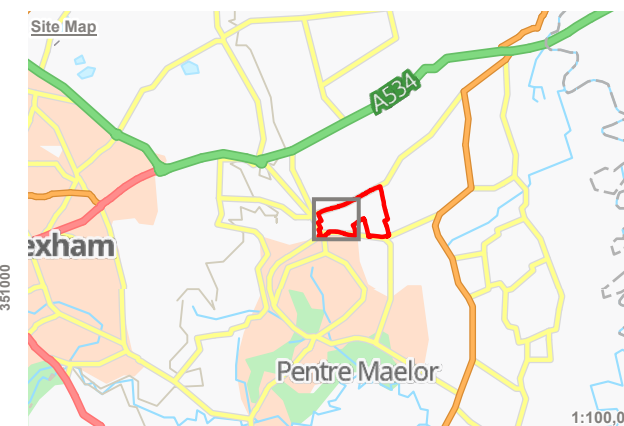


KEY

- Site boundary
- A34 Broad-leaved tree with low bat suitability
- A35 Broad-leaved tree with moderate bat suitability
- A36 Broad-leaved tree with high bat suitability

Note:
The locations of habitats and habitat features are indicative.

Reproduced by permission of Ordnance Survey on behalf of HMSO.
Contains OS data © Crown Copyright and database right 2023. All rights reserved.
Contains data from OS Zoomstack. Licence number 0100057890.



A	Site boundary update	SP	AE	14/04/2023
Rev	Description	Drawn	Approved	Date

THE ENVIRONMENT PARTNERSHIP

Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.[tep.uk.com](http://www.tep.uk.com)

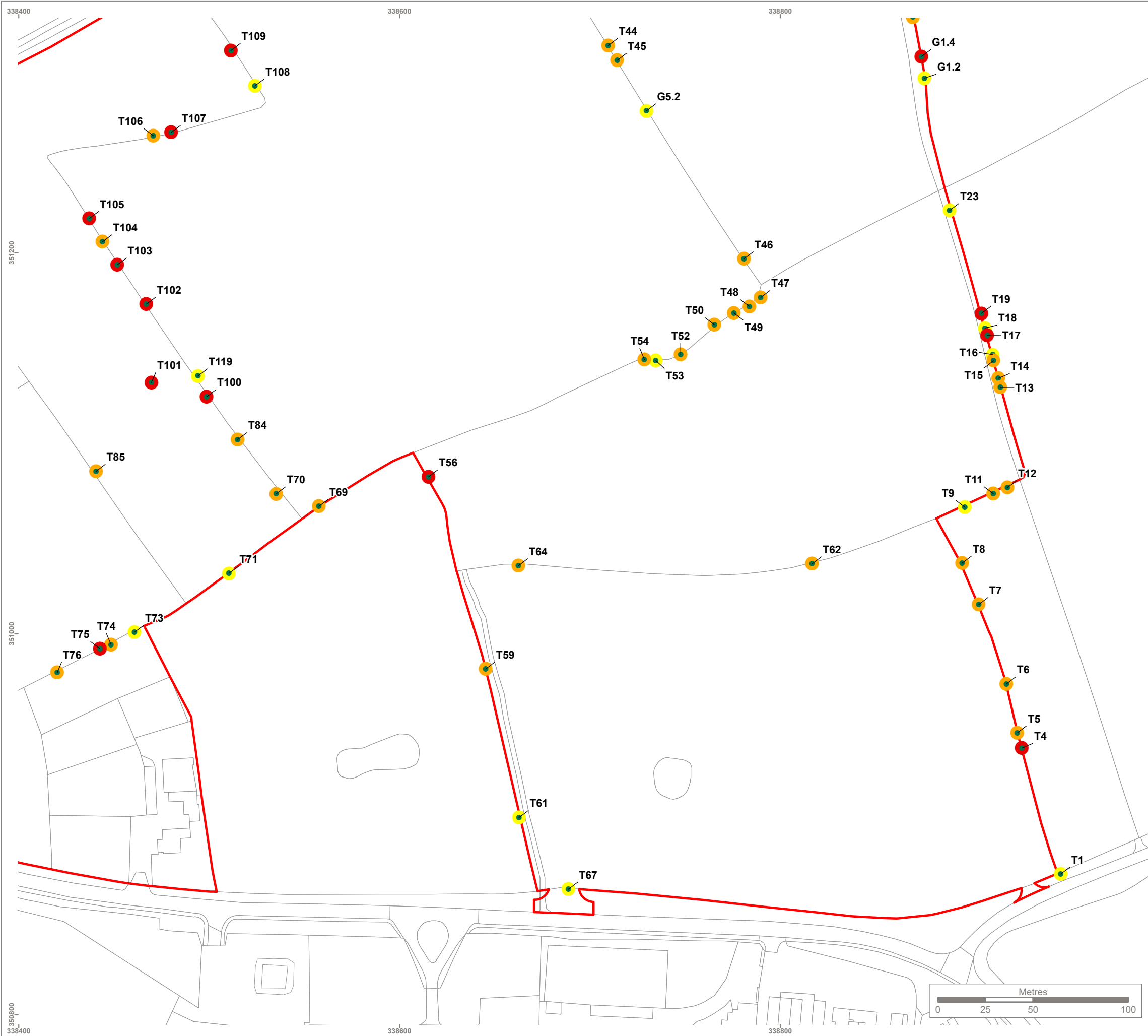
Project
Land North of Bryn Lane, Wrexham

Title
Bat Ground Level Tree Assessment Results

Drawing Number
G9134.015.2 A

Page 2 of 4

Drawn	Checked	Approved	Scale	Date
BJ	SA	KG	1:2,000 @ A3	12/06/2023



KEY

- Site boundary
- A34 Broad-leaved tree with low bat suitability
- A35 Broad-leaved tree with moderate bat suitability
- A36 Broad-leaved tree with high bat suitability

Note:
The locations of habitats and habitat features are indicative.

Reproduced by permission of Ordnance Survey on behalf of HMSO.
Contains OS data © Crown Copyright and database right 2023. All rights reserved.
Contains data from OS Zoomstack. Licence number 0100057890.

Site Map

The inset map shows the site location (indicated by a red rectangle) in the context of the surrounding area, including Wrexham and Pentre Maelor. The map scale is 1:100,000.

A	Site boundary update	SP	AE	14/04/2023
Rev	Description	Drawn	Approved	Date

THE ENVIRONMENT PARTNERSHIP

Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

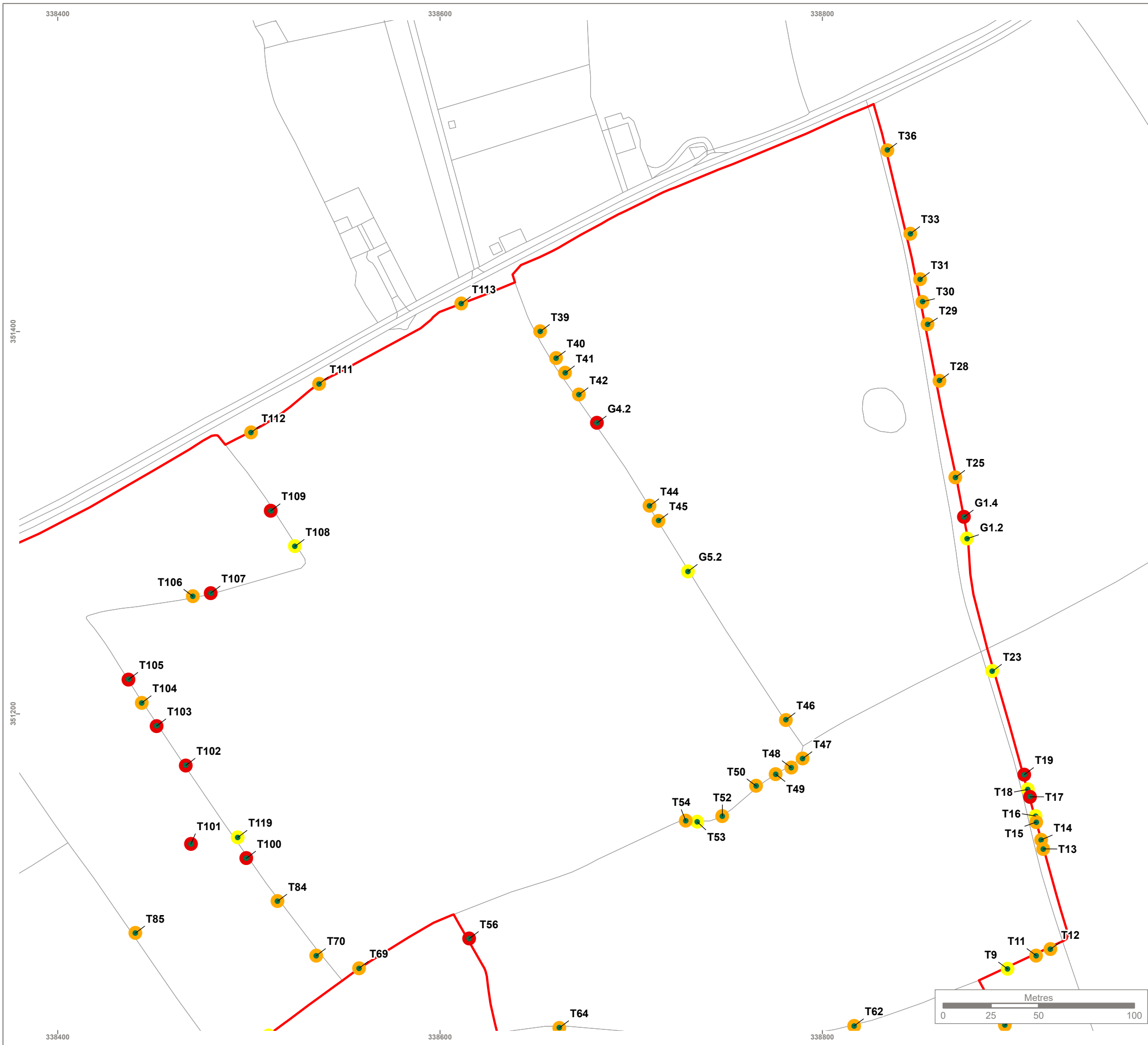
Project
Land North of Bryn Lane, Wrexham

Title
Bat Ground Level Tree Assessment Results

Drawing Number
G9134.015.3 A

Page 3 of 4

Drawn	Checked	Approved	Scale	Date
BJ	SA	KG	1:2,000 @ A3	12/06/2023



KEY

- Site boundary
- A34 Broad-leaved tree with low bat suitability
- A35 Broad-leaved tree with moderate bat suitability
- A36 Broad-leaved tree with high bat suitability

Note:

The locations of habitats and habitat features are indicative.



Reproduced by permission of Ordnance Survey on behalf of HMSO.
 Contains OS data © Crown Copyright and database right 2023. All rights reserved.
 Contains data from OS Zoomstack. Licence number 0100057890.



A	Site boundary update	SP	AE	14/04/2023
Rev	Description	Drawn	Approved	Date



THE ENVIRONMENT PARTNERSHIP

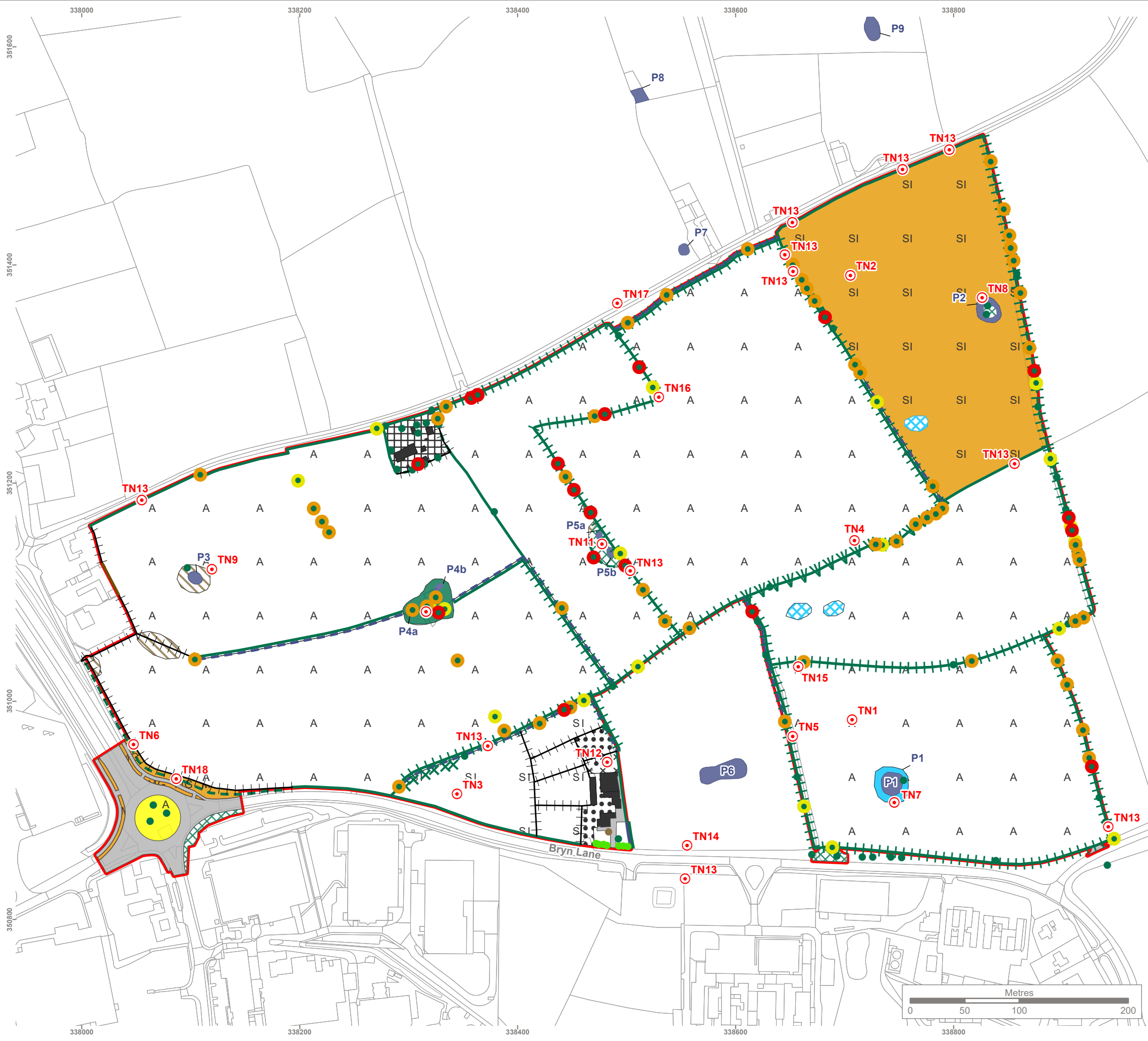
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
 Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
 Land North of Bryn Lane, Wrexham

Title
 Bat Ground Level Tree Assessment Results

Drawing Number G9134.015.4 A	Page 4 of 4
---------------------------------	-------------

Drawn BJ	Checked SA	Approved KG	Scale 1:2,000 @ A3	Date 12/06/2023
-------------	---------------	----------------	-----------------------	--------------------



KEY

Site boundary

Target note

Scattered scrub

Scattered broad-leaved tree

Scattered coniferous tree

Broad-leaved tree with low bat suitability

Broad-leaved tree with moderate bat suitability

Broad-leaved tree with high bat suitability

Scattered introduced shrub

Species-poor intact hedge

Species-poor intact hedge and ditch

Species-poor intact hedge and dry ditch

Species-poor defunct hedge

Native species-rich hedge and trees

Species-poor hedge and trees

Species-poor defunct hedge and trees

Species-poor hedge and trees with ditch

Species-poor hedge and trees with dry ditch

Fence

Wall

Semi-natural broad-leaved woodland

Dense/continuous scrub

Semi-improved neutral grassland

Modified neutral grassland

Poor semi-improved grassland

Tall ruderal

Swamp

Ephemeral pool

Standing water

Arable

Amenity grassland

Bare ground with ephemeral/short perennial

Building

Bare ground

Hardstanding

Not surveyed

Note:
The locations of habitats and habitat features are indicative.

Reproduced by permission of Ordnance Survey on behalf of HMSO.
Contains OS data © Crown Copyright and database right 2023. All rights reserved.
Contains data from OS Zoomstack. Licence number 0100057890.



B	Site boundary update	SP	AE	17/04/2023
A	Site boundary amends; target note updates; trees added	BJ	AE	01/09/2022
Rev	Description	Drawn	Approved	Date

THE ENVIRONMENT PARTNERSHIP

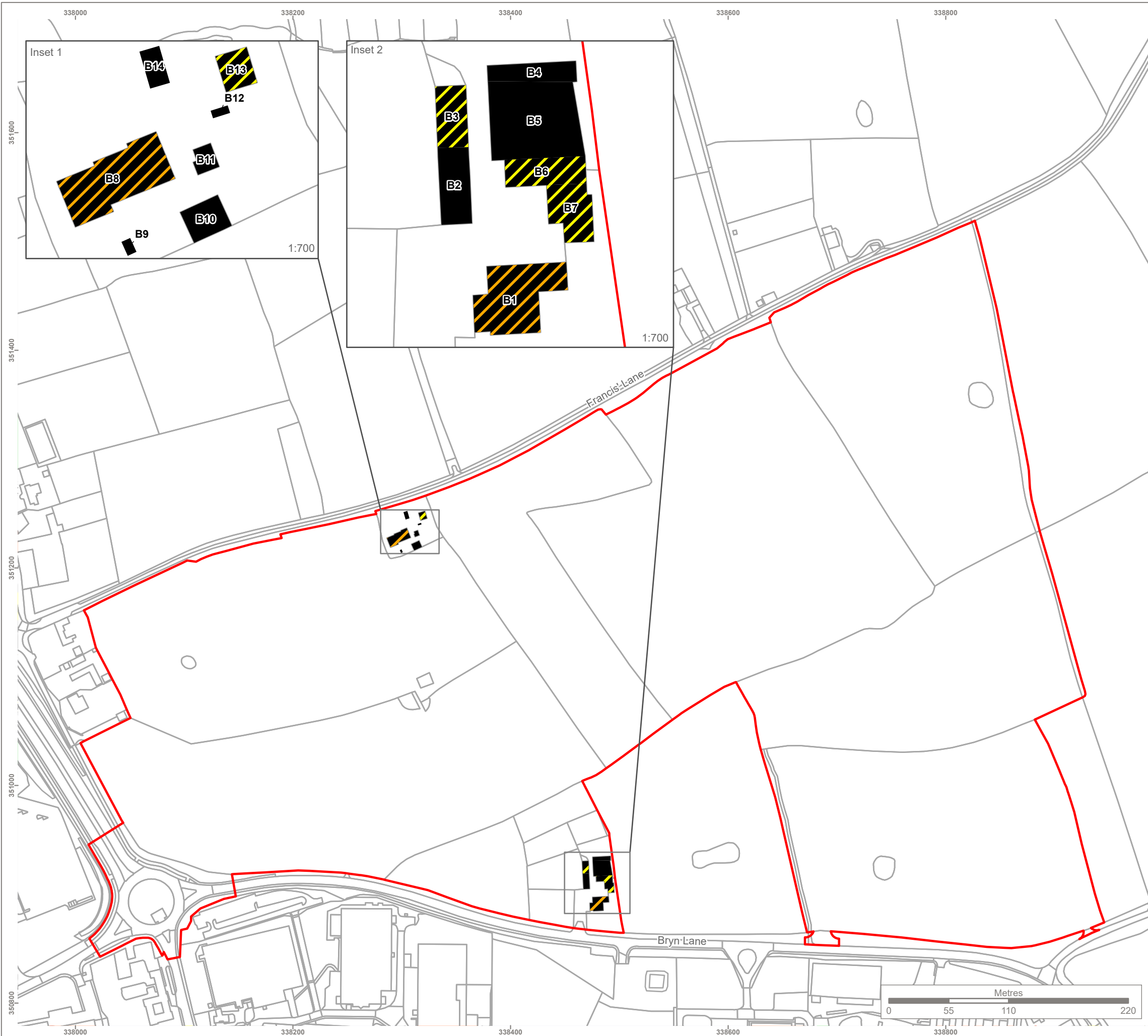
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Land North of Bryn Lane, Wrexham

Title
Phase 1 Habitat Survey

Drawing Number
G9134.007B

Drawn	Checked	Approved	Scale	Date
BJ	JO	AE	1:3,500 @ A3	19/04/2023



KEY

- Site boundary
- Building with negligible bat roost suitability
- Building with low bat roost suitability
- Building with moderate bat roost suitability

Note:

The locations of habitats and habitat features are indicative.



Reproduced by permission of Ordnance Survey on behalf of HMSO.
Contains OS data © Crown Copyright and database right 2023. All rights reserved.
Licence number 0100057890.



A Site boundary update		SP	AE	17/04/2023
Rev	Description	Drawn	Approved	Date



**THE
ENVIRONMENT
PARTNERSHIP**

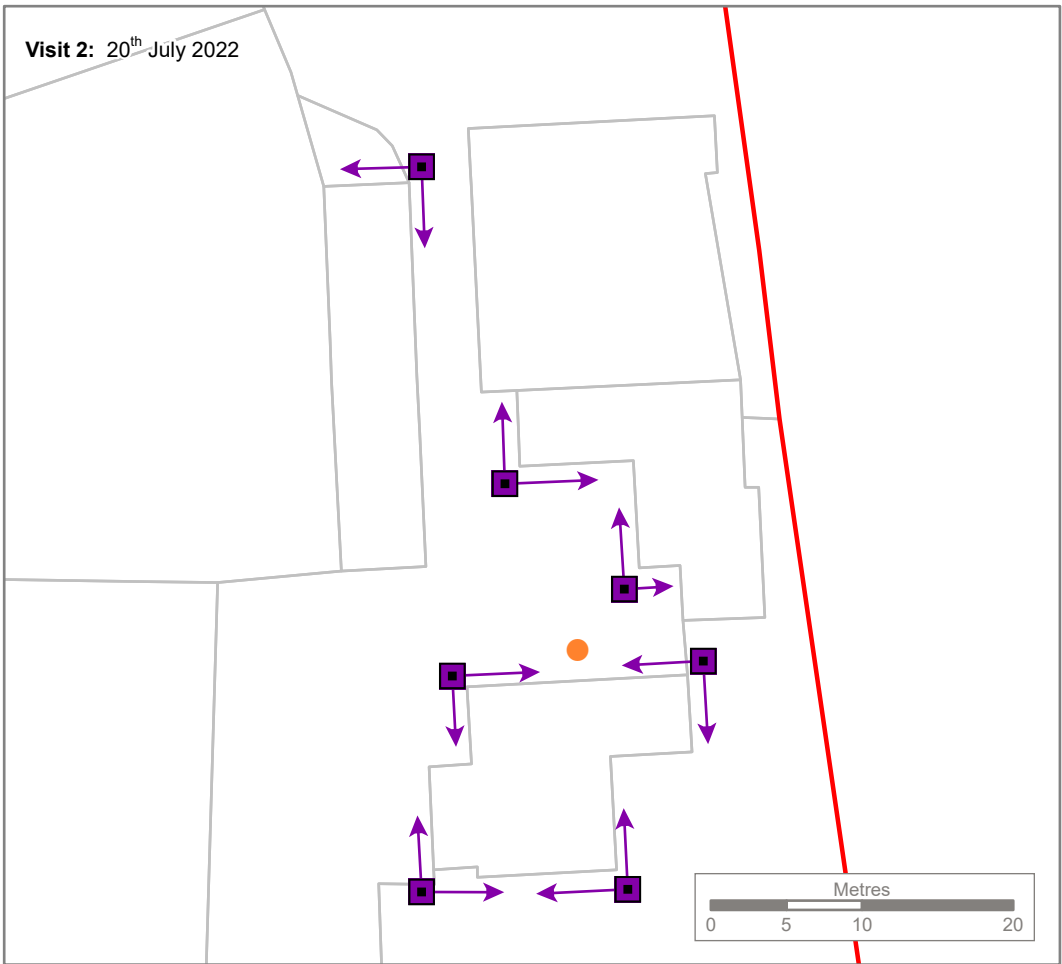
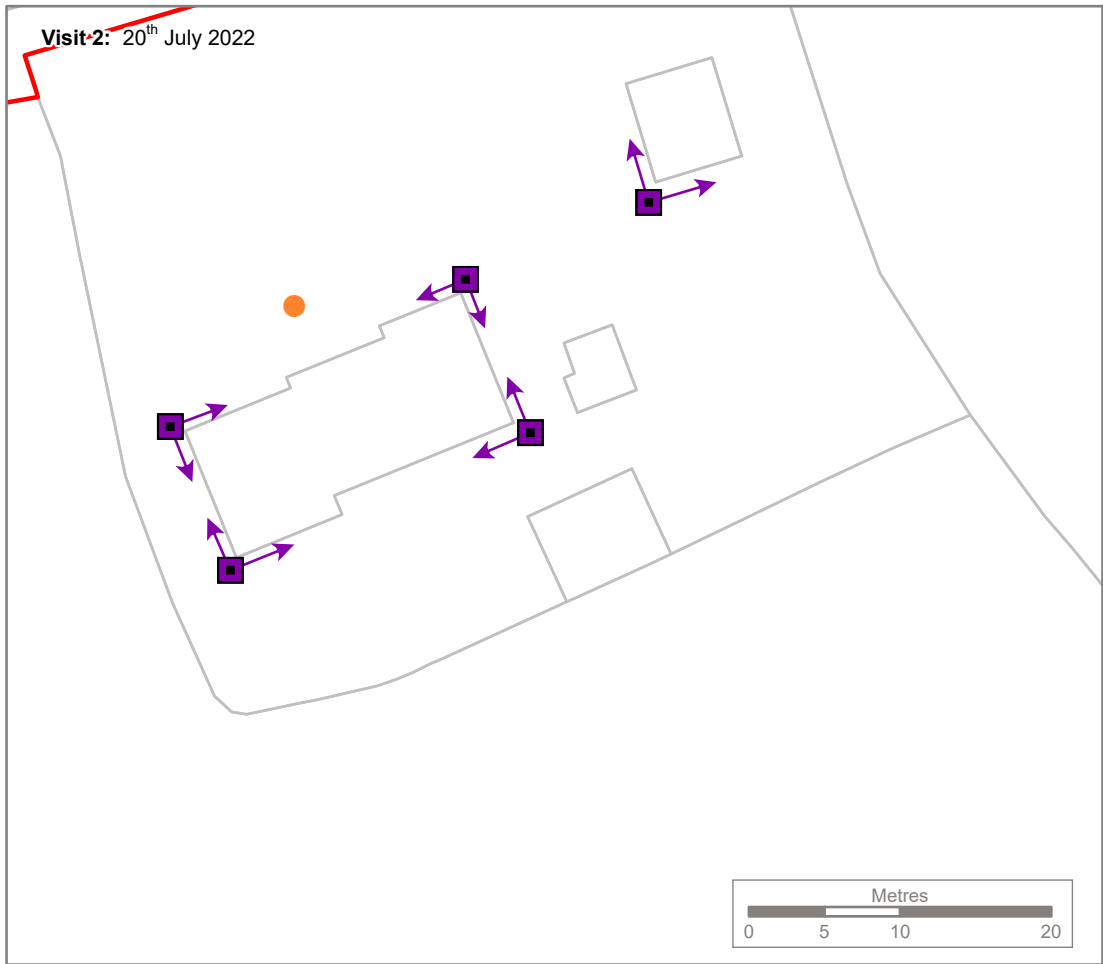
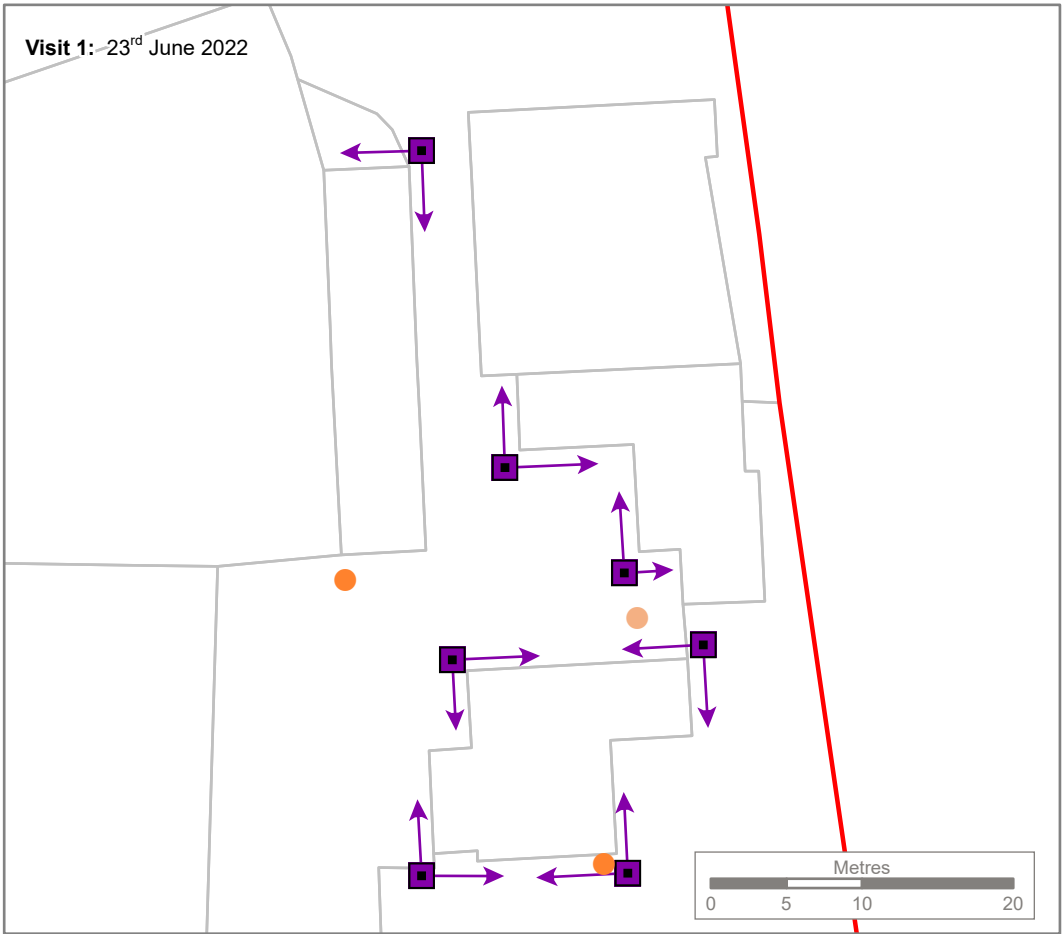
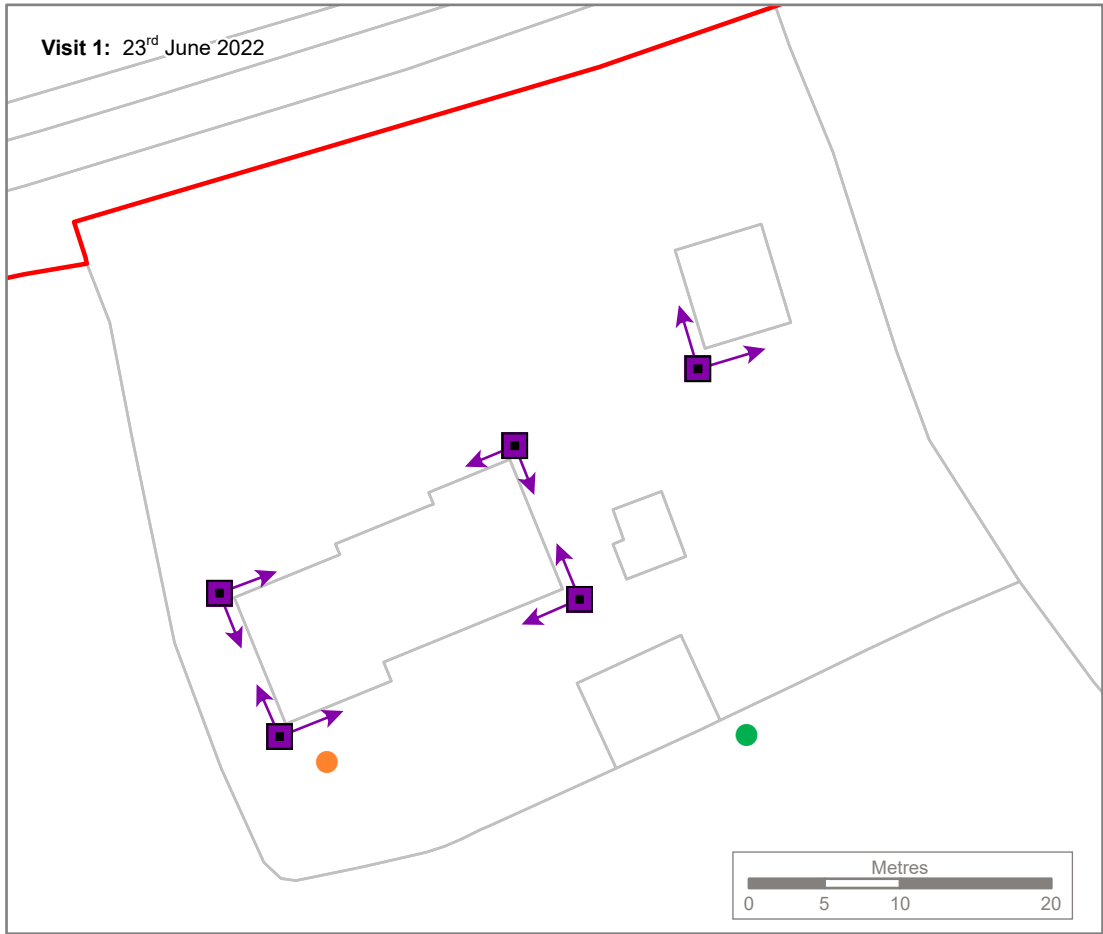
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.[tep.uk.com](http://www.tep.uk.com)

Project
Land North of Bryn Lane, Wrexham

Title
Building Bat Roost Suitability

Drawing Number
G9134.031A

Drawn	Checked	Approved	Scale	Date
ET	CW	AW	1:3,500 @ A3	26/04/2023



KEY

Site boundary

Surveyor Locations

Surveyor

Surveyor field of view

Bat Records

Common pipistrelle

Soprano pipistrelle

Noctule



Reproduced by permission of Ordnance Survey on behalf of HMSO.

Contains OS data © Crown Copyright and database right 2023. All rights reserved.
OS licence number 0100057890.



A	Site boundary update	SP	AE	17/04/2023
Rev	Description	Drawn	Approved	Date



THE
ENVIRONMENT
PARTNERSHIP

Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Land North of Bryn Lane, Wrexham

Title
Bat Emergence Survey

Drawing Number
G9134.032A

Drawn	Checked	Approved	Scale	Date
ET	CW	AW	1:500 @ A3	17/04/2023



HEAD OFFICE

Genesis Centre,
Birchwood Science Park,
Warrington
WA3 7BH

Tel: 01925 844004
E-mail: tep@tep.uk.com

**MARKET
HARBOROUGH**

No. 1 The Chambers,
Bowden Business Village,
Market Harborough,
Leicestershire,
LE16 7SA

Tel: 01858 383120
E-mail: mh@tep.uk.com

GATESHEAD

Office 26, Gateshead
International Business
Centre,
Mulgrave Terrace,
Gateshead
NE8 1AN

Tel: 0191 605 3340
E-mail: gateshead@tep.uk.com

LONDON

8 Trinity Street,
London,
SE1 1DB

Tel: 020 3096 6050
E-mail: london@tep.uk.com

CORNWALL

4 Park Noweth,
Churchtown,
Cury,
Helston
Cornwall
TR12 7BW

Tel: 01326 240081
E-mail: cornwall@tep.uk.com
