Brindle &Green

Ecological Impact Assessment

Coleg Sir Gar, Pibwrlwyd Campus, Carmarthen

Report Reference: BG24.331

September 2025

For every environment

Brindle &Green

For every environment

Liability

Brindle & Green has prepared this report for the sole use of:

HSP Consulting

The report is in accordance with the agreement under which our services were performed. No warranty, express or implied, is made as to the advice in this report or any other service provided by us. This report may not be relied upon by any other party except the person, company, agent or any third party for whom the report is intended without the prior written permission of Brindle & Green.

The content of this report is, at least in part, based upon information provided by others and on the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from any third party has not been independently verified by Brindle & Green unless otherwise stated in the report.

Copyright

www.brindlegreen.co.uk

Head Office
Brindle & Green Limited
Unit 3 Silverhill Court, Radbourne, Derby, DE6 4LY
Tel: 0800 222 9105

Sheffield Office
Brindle & Green Limited
Horizon House
Whiting Street
Sheffield S8 9QR

Barnsley Office
Brindle & Green Limited
Sergeants House
36 Edderthorpe Lane
Barnsley S73 9AT

London Office
Brindle & Green Limited
Nutter Lane
Wanstead
London E11 2HZ

Kent Office
Brindle & Green Limited
Sandy Lane
Sevenoaks
Kent TN13 3TP

Document Control

Report	Name	Date
Prepared by	Emily Stone ACIEEM Consultant Ecologist	08/09/2025
1st Check by	Dave Judson Consultant Ecologist	11/09/2025
2nd Check by	Victoria Halford-Meyer Principal Ecologist	24/09/2025
Issued by (PDF)	Emily Stone ACIEEM Consultant Ecologist	26/09/2025
REV1 issued by	N/A	N/A

Revision Details

Revision	Approved	Revision Details
N/A	N/A	N/A

Project Details

Project carried out by:

Brindle and Green

The Old Estate Office
Silverhill Farm
Radbourne
Derby.
DE6 4LY
Head Office: 01332 825771
Email: info@brindlegreen.co.uk
Website: www.brindlegreen.co.uk

Project carried out for:

HSP Consulting

Lawrence House
6 Meadowbank Way
Eastwood
Nottingham
NG16 3SB

Project site:

Coleg Sir Gar, Pibwrlwyd Campus

Pibwrlwyd Ln,
Carmarthen,
Carmarthenshire,
SA31 2NH

Grid reference: SN 41120 18292
W3W: headed.shuts.looks

Contents

Figures

Tables

1 Summary

1.1 EcIA Contents

1.1.1 The production of an Ecological Impact Assessment (EcIA) is considered the best practice methodology (by the Chartered Institute of Ecology and Environmental Management (CIEEM)) for documenting all ecological issues associated with proposed development and supersedes the more out of date method of preparing individual reports for differing species and habitats. The aim is to consider any impacts alongside each other, to provide a coordinated solution when considering mitigation, and to set out clear and well-defined enhancement prescriptions that work in line with the plans for development. Through assessing the scale of impact (Page 24) the aim is to result in a scheme that is assessed as making a positive contribution to biodiversity at a local level at the very least.

1.1.2 This EcIA draws on the results of the Preliminary Ecological Appraisal (PEA) undertaken by Arbtech (October 2024) and the additional PEA walkover for a portion of land to the south of the campus undertaken by Brindle and Green in April 2025. This EcIA also adds the results of additional protected species and habitat surveys that have been completed since. In the case of this site, the PEA undertaken by Arbtech (October 2024) identified habitats suitable for supporting roosting bats, foraging and commuting bats, badger (*Meles meles*), reptiles, and hazel dormouse (*Muscardinus avellanarius*), as well as considering the usual impacts associated with other species of principle importance listed under Schedule 7 of the Environment (Wales) Act.

1.1.3 Further protected species surveys undertaken during the active season of 2025 failed to identify the presence of badgers, or reptiles within the application boundary.

1.1.4 Bat emergence surveys across the buildings on site confirmed a total of 12 bat roosts :

- Roost 1: Common pipistrelle (*Pipistrellus pipistrellus*) day roost, located within an externally mounted bat box on the southern elevation of the tower block on B1;
- Roost 2: Common pipistrelle day roost, located within an externally mounted bat box on the northeastern elevation of B1;
- Roost 3: Common pipistrelle maternity roost located under PVC cladding on the northern elevation of B1;

- Roost 4: Common pipistrelle day roost under wooden eaves beneath the pitched roof on the northern elevation of B2;
- Roost 5: Soprano pipistrelle (*Pipistrellus pygmaeus*) maternity roost under wooden eaves on the eastern gable end of B2;
- Roost 6: Common pipistrelle day roost located under wooden eaves on western gable end of B2;
- Roost 7: *Pipistrellus sp.* day roost located within externally mounted bat box on the western gable end of B3;
- Roost 8: *Pipistrellus* sp. day roost located within externally mounted bat box on the western gable end of B3;
- Roost 9: Soprano pipistrelle day roost located within externally mounted bat box on the western gable end of B3;
- Roost 10: Soprano pipistrelle day roost located within externally mounted bat box on the western gable end of B3;
- Roost 11: Soprano pipistrelle day roost located within externally mounted black bat box on the eastern elevation of B6; and
- Roost 12: *Pipistrellus* sp. day roost located within externally mounted black bat box on the eastern elevation of B6.

1.1.5 Hazel dormouse were found to be present along the hedgerow forming the eastern boundary of the site (H1).

1.1.6 Himalayan balsam (*Impatiens glandulifera*) was also identified across the site. This invasive non-native plant species is listed under Schedule 9 of the Wildlife and Countryside Act, and as such, the spread of these species into the 'wild' should be prevented and controlled and should be removed from site and suitably disposed by a qualified contractor.

1.1.7 This report was compiled following the revised Guidelines for EcIA in the UK and Ireland (CIEEM, 2018) and highlights and addresses the following ecological constraints.

2 Introduction

2.1 Context

2.1.1 Brindle and Green Ltd were commissioned by HSP Consulting to provide an Ecological Impact Assessment (EcIA) at Coleg Sir Gar, Pibwrlwyd Campus, Carmarthen (Figure 1). This EcIA report documents the constraints identified within the Preliminary Ecological Appraisal undertaken by Arbtech (October 2024) and the PEA undertaken on a portion of land to the south of the campus by Brindle and Green Ltd in April 2025 and adds the results of additional protected species and habitat surveys undertaken during 2025. The EcIA includes the following sections:

- Baseline Ecological Conditions
- Assessment of effects and mitigation measures
- Enhancement strategy
- Summary of residual effects

2.1.2 The application site is approximately 5.09ha in extent and is situated in a rural area on the southern periphery of Carmarthen, Carmarthenshire. The site forms part of the Coleg Sir Gar Pibwrlwyd campus and is dominated by six buildings (five of which (B1, B2, B3, B4, and B5) form part of the existing college campus, and a residential building (B6)), with hardstanding alongside areas of well-mown amenity grassland, mixed woodland, introduced shrub, scattered trees, bound by native species-rich hedgerows and treelines.

2.1.3 The site is the subject of a full application seeking to facilitate the demolition of the existing college campus, and development of new college blocks with associated parking, access and landscaping. It is understood that the proposals will involve significant ground clearance as well as the demolition of existing buildings. Detailed design proposals are presented within Appendix 6 of this report.

2.1.4 This report prescribes additional mitigation measures during construction and post-construction phases to avoid, reduce or reverse adverse impacts and prevent biodiversity loss.

2.1.5 Results presented within this report have been prepared by an experienced ecologist and are therefore the view of Brindle and Green Limited. The survey is based on information provided

by our client, the development proposals, and the results of the desk study and our survey of the site.

3 Methodology

3.1 Desk Study

3.1.1 Table 1 below lists organisations and/or resources used as part of the desk study process. Data regarding any known statutory or non-statutory sites in addition to any records for protected species were requested from the following sources:

Table 1: Ecological Data Resources

Consultant	Requested Data	Search Radius	Date Requested
Local Ecological Records Centre *West Wales Biodiversity Information Centre*	– Protected and notable species records – Local, National and International Site Designations	2km	October 2024
MAGIC Maps	– National and International Site Designations – Granted EPS Development Licences	2km	08/08/2025
Arbtech	– Preliminary Ecological Appraisal (Arbtech, October 2024)	2km	October 2024

3.2 UK Habitat Classification Survey

3.2.1 A UK Habitat Classification survey was initially undertaken by Arbtech to the north of Pibwrlwyd Lane on 4th March 2024 and 15th October 2024. Following revisions to the site layout and application boundary, Brindle and Green undertook a UK Habitat Classification survey on an area of land to the south of Pibwrlwyd Lane on 29th April 2025.

3.2.2 The UK Habitat Classification survey by Brindle and Green was undertaken where habitats were categorised and mapped (Appendix 1) following the UK Habitat Classification Version 2.01 (UK Hab Ltd., 2023) to establish the presence and distribution of habitat types within the site and potential ecological constraints to development

3.2.3 The UKHab System is comprised of a five-level Primary Habitat Hierarchy, with each successive level providing increasingly detailed descriptions of habitat parcels present onsite. The system encompasses all habitat types found in the UK, irrespective of scale or geographic range, including UK Biodiversity Action Plan Priority Habitats and Habitats Directive Annex I habitats.

- Level 1 includes the description of each major ecosystem present; Terrestrial, Freshwater, and Marine.

- Level 2 includes nine ecosystem types; Grassland, Woodland and Forest, Heathland and Shrub, Wetland, Cropland, Urban, Sparsely Vegetated Land, Rivers and Lakes, and Marine Inlets and Day Waters.

- Level 3 describes the 20 broad habitat types of the nine ecosystems outlined in Level 2. Examples include Acid Grassland, Calcareous Grassland, Neutral Grassland, Modified Grassland, Broadleaved and Mixed Woodland, Hedgerows, and Dense Scrub.

- Level 4 expands the 20 broad habitat types of Level 3 into 85 detailed habitat types, including Lowland Meadows, Other Neutral Grassland, Lowland Mixed Deciduous Woodland, and Other woodland; Mixed. This level also allows the separation of 46 UK Biodiversity Action Plan Priority habitats from other habitats of lower ecological significance.

- Level 5 provides a further detailed expansion to Level 4 habitat types. 119 habitats are described within this level including 72 habitats as listed in Annex 1 of the Habitats Directive.

3.2.4 Primary habitat types are accompanied by a list of Secondary Codes, which are further categorised into 'Essential' and 'Additional' codes. Each recorded habitat parcel is assigned a single Primary Habitat Code from Levels 2-4 and includes all Essential Secondary Code features relating to the habitat parcel. Additional Secondary Codes are also applied where relevant. No more than six Secondary Codes are recommended per parcel (UKHabs Ltd. 2023) and a list of Secondary Code definitions relevant to the site have been provided within Appendix 1. Where additional details were required, Target Notes have also been provided (Appendix 2). A plant species list (Appendix 2) summarising all plants identified on site was produced during the survey and all scientific nomenclature was produced according to Stace (2010).

3.2.5 This survey was extended to note the potential for habitats on site to support protected and/or notable species and for evidence of any such species. The habitats on site were assessed for their suitability to support protected species in relation to the habitat type found at the site. Any incidental sightings or field signs were noted at the time of survey. Where evidence of, or the confirmed presence of a protected species was identified, further species-specific surveys may

be recommended to ensure that the presence or otherwise of a legally protected species is fully considered prior to the determination of any planning approval or to guide an EPS development licence.

3.2.6 Hedgerows on site were assessed following the Hedgerow Survey Handbook (DEFRA 2007) and defined as species-rich if the structural species making up a surveyed 30m section of hedgerow included at least four native woody species. Results were compiled and assessed against qualifying criteria within the Hedgerow Regulations (1997) and also the UK Biodiversity Action Plan.

3.2.7 Legislation, guidance and methodology for species relevant to this site are presented in full within Appendices 4 and 5 of this report.

3.2.8 The survey of the campus to the north of Pibwrlwyd Lane was undertaken by Arbtech on 4th March 2024 and 15th October 2024 by Jonathan Stuttard BSc (Hons) MSc (Principal Consultant).

3.2.9 The survey on an area of land to the south of Pibwrlwyd Lane was undertaken on 29th April 2025 by Matthew Norris BSc (Hons.) MRSB, Technical Ecological Mitigation Lead and Matthew Jones, trained seasonal ecologist.

3.3 Phase 2 Surveys

3.3.1 Within the Preliminary Ecological Appraisal (PEA) undertaken by Arbtech (October 2024), the following ecological phase 2 surveys were recommended and undertaken by Brindle and Green to allow a full impact assessment on the ecological value of the application site.

- Ground Level Tree Assessment (GLTA)
- Bat Roost Characterisation Survey
- Bat Activity Survey
- Badger Survey
- Reptile Survey
- Hazel Dormouse Survey

Roosting Bats: Ground Level Tree Assessment (GLTA)

3.3.2 Trees within the application site were subjected to a ground level tree assessment and their suitability categorised based upon Bat Conservation Trust guidance (Table 3) following visual assessment and categorised into one of three categories.

Table 2: Guideline for assessing the suitability of a tree to support roosting habitat amended from Collins, J (2023)

Ground Level Tree Assessment	
PRF - I	PRF only suitable for individual bats or small numbers of bats due to size or lack of suitable surrounding habitats
PRF - M	PRF suitable for multiple bats and may therefore be used by a maternity colony
Known roost	Known roost present through local records, evidence, sightings, etc

3.3.3 The survey was undertaken on the 12th March 2025 by Emily Stone ACIEEM, Consultant Ecologist and Billie-Jo Payne, Assistant Ecologist.

Bat Roost Characterisation Surveys

3.3.4 Bat emergence surveys were carried out following the guidelines outlined within the UK Bat Mitigation Guidelines (Reason and Wray, 2023) and the Bat Conservation Trust Good Practice Guidelines (Colins, 2023). Where deviation from best practice has been required, details have been provided within the limitations section of the report.

3.3.5 Buildings 1, 2, 3, 4, and 6 were all assessed by Arbtech (October 2024) as having 'high' suitability for roosting bats, and as such were subjected to three bat dusk emergence surveys by Brindle and Green in 2025. Building 5 (B5) was assessed to have 'moderate' suitability for roosting bats and was subjected to two bat dusk emergence surveys. The dusk surveys began 15 minutes before sunset and lasted for a minimum of 1.5hrs following sunset.

3.3.6 Bat emergence surveys were also undertaken on three trees across the site (Tree 9, Tree 45, and Tree 64) which were assessed to have PRF-M suitability (i.e. suitability for multiple roosting bats).

3.3.7 Each surveyor operated an Echo Meter Touch detector connected to an iPad. Where possible, species were identified using information from visual and audio cues, all sonograms were recorded on to the iPad and were analysed using Kaleidoscope software to confirm species identification.

3.3.8 All bat passes, including time and species, were recorded on to field maps, noting direction of flight and emergence. Where possible, the number of individuals observed, and behaviour of the bat was also recorded, including foraging, commuting and social calling behaviours.

3.3.9 Surveys were only carried out in dry and calm conditions, when bats are most likely to be active.

3.3.10 The surveys were undertaken between May and August 2025 by Matthew Norris BSc (Hons.) MRSB, Technical Ecological Mitigation Lead, Emily Stone BA (Hons), MSc (Hons), Consultant Ecologist, Aaron Davies, Ecologist, David Caplin, Ecologist, Eileen Robley, Ecologist, Oliver Perkins, Ecologist, Molly Gillham, Ecologist, Joe Allsop BSc (Hons), MSc, Consultant Ecologist, Lucy Talbot BSc (Hons), Consultant Ecologist, Marc Redmond BSc (Hons), Consultant Ecologist, Emily Murchison BSc (Hons) MSc, Consultant Ecologist, Billie-Jo Payne BSc (Hons), Assistant Ecologist, Magdalena Chaborska BSc (Hons), Assistant Ecologist, Josh Bowler BSc (Hons), Graduate Ecologist, and Becky Wilson, BSc (Hons), Graduate Ecologist.

3.3.11 The survey was overseen by Lucinda Sweet PhD, MCIEEM Natural England Bat Licence (Class Level 2, 2019-9122-CLS-CLS), Great Crested Newt Licence (Class Level 1, 2016-22852-CLS-CLS), Director.

3.3.12 Specific dates, survey conditions, and results can be found within Appendix 8b.

Bat Activity Survey

3.3.13 Bat activity surveys were carried out following the guidelines outlined within the UK Bat Mitigation Guidelines (Reason and Wray, 2023) and the Bat Conservation Trust Good Practice Guidelines (Colins, 2023). Two dusk transect surveys have been undertaken in 2025, one in Spring (April), and one in Summer (July) with an Autumn survey proposed in mid-September 2025. One transect route was walked per survey.

3.3.14 Two surveyors walked a pre-planned route at a constant speed along the linear features of the application site, to collect bat activity data. Surveyors stopped at predetermined point count locations along the transect where activity was recorded for a 5-minute period. If a bat crossed during the transect, it was recorded, and the direction of activity recorded before continuing the transect. Surveyors were equipped an Echo Meter Touch detector connected to an iPad. Where possible, species were identified using information from visual and audio cues, all

sonograms were recorded on to the iPad and were analysed using Kaleidoscope software to confirm species identification.

3.3.15 Three remote bat detectors (SM4 or SM Minis) were positioned in three locations upon the transect route, in order to collect bat activity data while unattended, over a prolonged period of time. The detector was set to activate 15 minutes prior to sunset and de-activate 15 minutes following sunrise. An automated survey was carried out for a 5-day period per month between April and August 2025, with static detectors to be deployed on site in September and October 2025. The data aims to provide context to the transect surveys carried out each month. To this purpose, five consecutive nights worth of data were collected and analysed, where possible including each of the nights on which transect surveys were undertaken.

3.3.16 The dusk transects surveys began at sunset and lasted for up to two hours following sunset. Two surveys were conducted on 28th April 2025 and 22nd July 2025 by Matthew Norris BSc (Hons.) MRSB, Technical Ecological Mitigation Lead, Emily Stone ACIEEM BA (Hons), MSc (Hons), Consultant Ecologist, Joshua Bowler, Graduate Ecologist, and Matthew Jones, trained seasonal ecologist. An autumn transect survey is proposed for September 2025.

3.3.17 Survey conditions, and results can be found within Appendix 8c.

Badger Survey

3.3.18 The badger survey was carried out in accordance with guidelines approved by the Chartered Institute of Ecology and Environmental Management, including: Best Practice Guidance - Badger Surveys, Scottish Natural Heritage (2003), Inverness Badger Survey 2003. Commissioned Report No. 096. and Surveying Badgers, The Mammal Society, Harris S, Cresswell P and Jefferies D (1989).

3.3.19 Legislation relating to Badgers can be found in Appendix 5 of this report.

3.3.20 Evidence of badger activity, including faeces, paths, scratching, snuffle holes, hair or footprints, was searched for along all the boundary features within the application site, within the woodland and along the banks of Cauldwell Brook situated along the western boundary of the application site.

Identification of Setts

3.3.21 Any holes discovered were categorised into sett types using the following criteria, quoted from Natural Resources Wales guidance (NRW, 2023):

- Main Setts usually appear well-used, well established and have a large number of holes. Big spoil heaps, often with piles of old bedding are located outside. Main setts tend to have well-worn paths between the sett and foraging areas, and between sett holes. They are generally considered to be breeding setts and are often in use all year round. A social group of badgers will only have one main sett within their territory.

- Annexe Setts are always close to a main sett and are usually connected by one or more obvious well-worn paths. They consist of several holes but are not necessarily in use the whole time, even if the main sett is very active. Should a second litter of cubs be born within the social group, they are likely to be raised within an annexe sett.

- Subsidiary Setts often these setts have very few holes, are usually at least 50m from a main sett and do not have an obvious path connecting them with another sett. Subsidiary setts are not continuously active.

- Outlying Setts usually comprising one or two holes with very little spoil outside (thus indicating that the tunnel system underground is not extensive), outlying setts have no obvious path connecting them with another sett and are used only sporadically.

3.3.22 Indication of the Level of Activity at each Sett:

- Well used sett entrances contain no debris or vegetation, are obviously regularly used and often show signs of having been recently excavated.

- Partially used setts are those with entrances not in regular use and which may have debris (twigs, leaves, moss etc) around the entrance. However, they could potentially be used regularly in the future with minimal clearance necessary.

- Disused setts show signs of not having been in use for a considerable period of time and would not be used again without extensive clearance by a badger.

3.3.23 A single day-time walkover survey was undertaken on 29th April 2025 by Matthew Norris BSc (Hons.) MRSB, Technical Ecological Mitigation Lead and Matthew Jones, trained seasonal ecologist.

Reptile Survey

3.3.24 A seven-visit, presence or likely absence survey was undertaken during suitable conditions between April and June 2025. Reptiles are considered to be active between March and October with optimal survey conditions during April and May or September. Surveys were undertaken during suitable weather conditions when the air temperature was between 9 - 18°C (Froglife, 1999).

3.3.25 Reptile refugia (1m x 1m) constructed from roofing felt were used to observe basking and sheltering reptiles. Refugia were laid at a density of between 5 and 10 per hectare of suitable habitat (Froglife, 1999).

3.3.26 Fifty mats were laid on 12th March 2025 and were left to embed for a minimum period of two weeks, with a series of seven visits undertaken on: 11th April, 17th April, 24th April, 2nd May, 13th May, 2nd June, and 17th June 2025 by David Caplin, Ecologist.

3.3.27 Survey conditions, and a refugia map can be found within Appendix 8e.

Hazel Dormouse Survey

3.3.28 Hazel dormouse surveys were carried out in accordance with guidelines approved by the Chartered Institute of Ecology and Environmental Management, including: The Dormouse Conservation Handbook, Bright, P. et al. (2006). Following best practice guidelines (Bright et al., 2006), a dormouse survey was undertaken between May and September 2021 in suitable habitat for this species. This included on-site scrub and woodland.

3.3.29 A total of 50 dormouse tubes were positioned on mature hedgerows within the application site, on 29th April 2025. Nest tubes were spaced at approximately 15-20m intervals. The tubes were inspected for the presence of dormice and signs indicative of their presence, in particular their characteristic woven nest.

3.3.30 In accordance with best practice, an index of probability (Table 4) is used to provide a score indicative of the thoroughness of the survey using 50 tubes as standard. Assumed absence of

dormice should not be based on a search effort score of less than 20 (the minimum score for a robust survey effort), which for example, would be obtained by using 50 tubes from June to November (2+2+5+7+2+2 = 20). May, August and September are the months when nest tubes are most frequently occupied, scoring four, five and seven respectively.

Table 3: Index of probability of finding dormice present in nest tubes (Bright et al., 2006).

Month	Index of Probability
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

3.3.31 The tubes were repeatedly checked monthly for the presence of recently constructed dormouse nests (Table 5). If a tube was found to contain a nest, the tube was removed from the vegetation and placed inside a large clear plastic bag. The tube was then opened to determine whether the nest was occupied by a dormouse. Evidence of dormouse activity, including faeces, hair and gnawed hazelnuts, was searched for in and around nest tubes and on the woodland floor both within the on-site woodland. If present, biometric data was collected from each dormouse. The tube was then replaced in its original position within surrounding vegetation.

Table 4: Dates of survey visits

Visit Number	Date of visit	Index of Probability Score
Set-up	29/04/2025	N/A
Visit 1	23/05/2025	2
Visit 2	27/06/2025	2
Visit 3	25/07/2025	5
Visit 4	22/08/2025	5
Visit 5	TBC	7
Total Points	-	21

3.3.32 Visits to check nest tubes were undertaken between May and September 2025 by Aaron Davies, Natural Resources Wales Hazel Dormouse Licence: S093072/1.

3.4 Limitations

3.4.1 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

3.4.2 The initial assessment by Arbtech (October 2024) was undertaken outside of the optimal survey period for phase 1 survey. Certain habitat types such as modified grassland and ornamental planting can be surveyed at any time of the year where the species that they comprise vary very little. As the additional PEA was undertaken by Brindle and Green within the optimal survey period (April 2025), It is confidently assessed that the habitat assessment of this site is representative of the flora year-round.

3.4.3 During the suite of emergence surveys undertaken on B3, one pipistrelle sp., which was observed inside Roost 7, located within an externally mounted bat box on Building 3, prior to the first survey on the 28th May, did not emerge, and this may have been attributed to cold and wet weather conditions before the survey commenced. The bat was found to still be present within the externally mounted bat box at the end of the survey. As no rain was recorded during the survey, and bats were still seen foraging and commuting throughout the survey, it was considered that the survey remained valid.

3.5 Report Lifespan

3.5.1 Given the transient nature of the subject, we would consider the survey results contained to be accurate for 1 year.

3.6 Evaluation Methodology

3.6.1 The site and protected and notable species within the zone of influence were classified into one of the following 6 groups (Table 5) following the Guidelines for Ecological Impact Assessment (CIEEM, 2016), depending on the size, rarity, diversity and fragility for a species population. The evaluation also considers County and nationally prepared documents such as LBAP and Red Data books.

Ecological Impact Assessment

3.6.2 The Ecological impacts of a development were assessed using data collected from historic records and current field surveys to and were categorised following EcIA guidelines (CIEEM, 2016) as follows:

- Highlight Protected or notable species which could be impacted as part of the development (Section 5).
- Determine the severity of the impact and effect without specific mitigation measures (Section 6).
- Outline a mitigation strategy highlighting areas of potential environmental improvement, which upon implementation aims to avoid or reduce negative impacts and effects (Section 6).
- Assess the feasibility and likelihood of success of the mitigation strategy (Section 7).
- Assess the residual impact of the development assessing that the mitigation has been successfully implemented and all prescriptions have been implemented (Section 7).

Classifying the extent of impacts and effects

3.6.3 The extent of impacts and effects need to be described in an unambiguous, consistent manner. The direction of change 'Positive' or 'Negative' should be assessed in relation to the overall biodiversity outcome, and should consider the duration, timing and reversibility of the constraint and be classified into one of the following five categories:

Table 5: Description of extent of impacts

Impact	Description
Positive (Significant)	Activity will create a beneficial effect over a long term, created a valued ecological feature
Positive (Not Significant)	Activity will create a beneficial effect without markedly improving the conservation status
Neutral	Effects or neutral or no net change will occur
Negative (Not Significant)	Negative effect without causing long-term irreversible damage

Impact	Description
Negative (Significant)	Significant Negative effect including loss or long-term irreversible damage to integrity or status of a valued ecological feature

Table 6: Definitions of each of the six evaluation brackets, indicating the importance of each habitat type and an example of their possible habitat status

Evaluation Value	Example of habitat or species
International	An internationally designated site or candidate site, including habitat or species included within Special Protection Areas (SPA) / Special Areas of Conservation (SAC), Ramsar Sites, listed under Annex 1 of the Habitats Directive.
National	Sites designated at UK level, e.g. Sites of Special Scientific Interest (SSSI), supporting species considered nationally threatened or rare. A regularly occurring regionally or county significant population/number of any nationally important species A feature identified as of critical importance within Section 41 of the NERC Act (2006).
Regional	Key Habitat type included within BAP. A regularly occurring, locally significant number of a regionally important species.
County	Designated sites, such as Sites of Biological Importance (SBIs) or viable habitat / species populations of value at a county level (LBAP).
District	District level designated sites, such as Local Wildlife Sites (LWS) or habitats / species populations of value at a district (Which have features qualifying for LWS status). Sites/features that are scarce within the district or which appreciably enrich the district habitat resource.
Local / Site	Habitats or species populations of value in a local (i.e. within ~ 5km of the site) context. Habitats of poor to moderate biological diversity e.g. established conifer plantations, species poor hedgerows and un-intensively managed grassland which supports species which are common to the local area and whose loss can be easily mitigated.

4 Site Context

4.1 Site Description

4.1.1 The application site can be found at SN 41130 18287 situated in a rural area on the south-eastern periphery of Carmarthen, Carmarthenshire. The site is bordered by open agricultural land to the north and east, Pibwrlwyd Lane and additional college infrastructure to the south, and the A484 and open agricultural land to the west.

4.1.2 To the north and east, the landscape consists of arable and pastoral land interspersed with a network of hedgerows and mature treelines that offer good connectivity across the landscape. To the south and west, the site is surrounded by a number of major commuter routes and local roads including the A484v (located 9m to the west of the site) and Pibwrlwyd Road (located immediately to the south of the college), both of which constitute a barrier to the dispersal of terrestrial species.

4.2 Zone of Influence

4.2.1 The zone of influence is used to describe the geographic extent of potential impacts of a proposed development. This is determined by the type of development proposed in relation to individual species and described within each of the species assessments within section 5 of this report. Maps, aerial photographs, historic data records and field survey results were examined to assess the relationship of the location and its connection to the surrounding environment and habitats beyond the site boundaries.

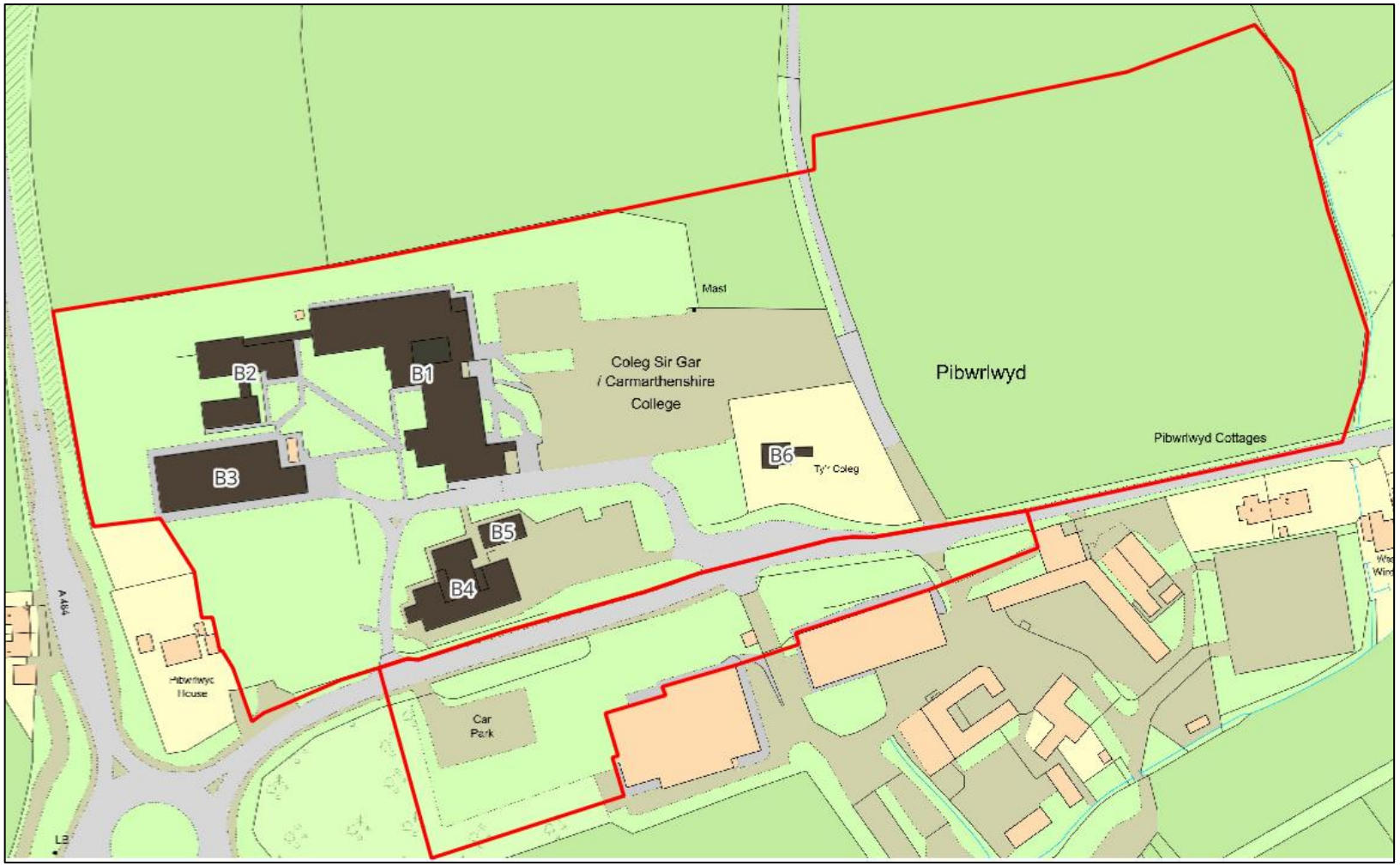


Figure 1: OS map of the project site and surrounding area. Red line boundary depicts application site. Surveyed buildings are shown in black

5 Baseline Ecological Conditions

5.1 Desk Study

Designated Sites

5.1.1 The site was subjected to a search for designated sites within a 2km radius of the site by Arbtech (October 2024) using data supplied by the Local Records Centre (West Wales Biodiversity Information Centre) and the online desk-based resource MAGIC.

5.1.2 The data supplied by West Wales Biodiversity Information Centre is summarised within Table 7. The search revealed four statutory and no non-statutory sites within a 2km radius of the site.

5.1.3 A search of the online resource Magic Maps found no additional sites with Statutory designations within the 2km radius search.

Table 7: Summary of Designated Sites within a 2km radius of the application site

Site Name	Grid Ref	Status	Reason for Designation	Distance from site
Statutory Sites				
River Twyi	SN687263	Special Area of Conservation (SAC)	River estuary which is considered to support sea lamprey (*Petromyzon marinus*), European River Lamprey (*Lampetra fluviatilis*), brook lamprey (*Lampetra planeri*), allis shad (*Alosa alosa*), twait shad (*Alosa fallax*), European bullhead (*Cottus gobio*), and otter (*Lutra lutra*).	330m west
River Twyi	SN687263	Site of Special Scientific Interest (SSSI)	An actively eroding river meandering across a wide flood plain which is important for birds and invertebrates, and the river is also of special interest for its fish species and otters, and in its lower reaches for its saltmarsh vegetation.	330m west
Glan Pibwr Stream Section	SN 417179	SSSI	An historic Arenig faunal locality; the type locality for the 'Ogygia marginata Beds' with their abundant trilobite faunas.	560m southeast

Site Name	Grid Ref	Status	Reason for Designation	Distance from site
Statutory Sites				
Carmarthen Estuaries	SS357991	SAC	Designated for its sandbanks, estuaries, mudflats and sandflats not covered by seawater at low tide, shallow inlets and bays, salicornia and other annuals colonising mud and sand, Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*). This internationally designated site is also noted for supporting sea lamprey (Petromyzon marinus), European River Lamprey (*Lampetra fluviatilis*), allis shad (*Alosa alosa*), twait shad (*Alosa fallax*), and otter (*Lutra lutra*).	730m southwest

5.1.4 The following Habitats of Principal Importance as listed on Schedule 7 of the Environment (Wales) Act. Habitat types were also identified within 2km of the site:

- Lowland mixed deciduous woodland – 0.05km west
- Intertidal mud/sand – 0.21km west
- Rivers and Streams (River Tywi) – 0.21km west
- Salt Marsh – 1.75km southwest.

Evaluation

5.1.5 Nearby designated sites are considered to have 'International value' following evaluation (Table 3), due to the site's proximity to the River Twyi SAC, River Twyi SSSI, Glan Pibwr Stream Section SSSI, and Carmarthen Estuaries SAC.

5.1.6 Direct impacts on nearby designated sites as a result of the proposed development are considered unlikely. However, there is the potential for indirect impacts (i.e. increased drainage run-off) particularly on Carmarthen Estuaries SAC. It is currently understood, based on condition assessments undertaken by Natural Resources Wales (NRW) (NRW, 2025), that high nutrient levels have been recorded at Carmarthen Bay and Estuaries SAC and the estuary is currently at an 'unfavourable condition'. Any new developments leading to an increase in

nitrogen discharges directly to, or catchments draining to these sites, could further contribute to the unfavourable condition of the SAC and/or undermine measures to restore these features.

5.1.7 Based on the proposed plans provided in Appendix 6, the proposed development will result in the demolition of the existing school buildings, and the construction of four new school buildings, which will increase run-off and discharge from the site. Therefore, as the site falls within the catchment for Carmarthen Estuaries SAC and is likely to increase drainage into this designated site, a Habitats Regulations Screening Assessment, including a nutrient neutrality assessment, is required to assess whether the proposed development will have a 'likely significant effect' on Carmarthen Estuaries SAC.

5.2 UK Habitat Classification Survey (Arbtech, October 2024)

5.2.1 A UK Habitat Classification Survey Map produced by Arbtech (October 2024) is presented in Appendix 1a of this report. The habitat descriptions below should be read in conjunction with the UK Habitat Classification plan and the Target Notes in Appendix 2.

5.2.2 A plant species list for those plants identified during the field survey is provided in the Target notes within Appendix 2.

5.2.3 Table 8 below provides a list of habitat types present on site along with their inclusion (or otherwise) as a National and / or Local Habitat of Principle Importance (HPI) (Previously referred to as Biodiversity Action Plan (BAP)).

Table 8: UK Habitat Types found on site and inclusion within UK BAP / HPI

Habitat Type	N HPI	L HPI	N/A
Buildings (u1b5)			✓
Developed land; sealed surface (u1b)			✓
Modified grassland (g4)			✓
Scattered trees (g4.32)			✓
Other broadleaved woodland; line of trees (g4.33)			✓
Introduced shrub (g4.847)			
Mixed scrub (h3h)			✓
Other woodland; mixed (w1h)			✓
Suburban mosaic of developed and natural surface; vegetated garden (u1d 828)			✓

Habitat Type	N HPI	L HPI	N/A
Species-rich native hedgerows associated with banks and ditches (h2a5 50 i11)	✓	✓	
Species-rich native hedgerows with trees associated with banks and ditches (h2a5 i1 50 i11)	✓	✓	
Non-native and ornamental hedgerows (h2b)			✓

Buildings (u1b5)

5.2.4 The PEA undertaken by Arbtech (October 2024), identified six buildings throughout the site, broadly comprising the main teaching building which also contains the college reception and canteen (B1), a library (B2) an art department (B3), an administration building (B4), a printing building (B5), and a house that provides ancillary accommodation (B6). Photographs and descriptions of these buildings and their value to support roosting bats is provided in the bat section below (Section 5.4).

Developed land; sealed surface (u1b)

5.2.5 Developed land; sealed surface was identified throughout the site during the PEA undertaken by Arbtech (October 2024), comprising macadam surfaces providing pedestrian and vehicular infrastructure (Figure 2).

Figure 2: Developed land; sealed surface located within the centre of the site (Arbtech, October 2024).

Modified grassland; Frequently mown with scattered trees, lines of trees, and introduced shrubs (g4 106 32 33 847)

5.2.6 Modified grassland was present throughout the site, during the PEA undertaken by Arbtech |(October 2024) (Figure 3). The grassland on site was found to be frequently mown to a sward heigh of approximately 50mm. As a result, the species diversity was limited to species tolerant of intense management.

5.2.7 Species recorded included abundant perennial rye grass (*Lolium perenne*), cock's foot (*Dactylus glomerata*), frequent Yorkshire fog (*Holcus lanatus*), creeping buttercup (*Ranunculus repens*), ribwort plantain (*Plantago lanceolata*), alongside occasional broadleaved dock (*Rumex obtusifolius*), common dandelion (*Taraxacum officinale*), hogweed (*Heracleum spondylium*), greater plantain (*Plantago major*), lesser celandine (*Ficaria verna*), yarrow (*Achillea millefolium*), common nettle (*Urtica dioica*), and daffodils (*Narcissus sp.*).

5.2.8 Scattered trees (Figure 4) and lines of trees (Figure 5) were present throughout the grassland on site. As such, the secondary codes '32 - scattered trees') and '33 – lines of trees') were applied to these habitat parcels.

5.2.9 Scattered trees on site were found to range from semi-mature to mature in age. Tree species recorded on site were mostly native alongside occasional ornamental specimens. Species recorded included ash (*Fraxinus excelsior*), beech (*Fagus sylvatica*), silver birch (*Betula pendula*), Cherry (*Prunus sp.*), sycamore (*Acer pseudoplatanus*), hornbeam (*Carpinus betulus*), Lawsons cypress (*Chamaecyparis lawsoniana*), goat willow (*Salix caprea*), field maple (*Acer campestre*), turkey oak (*Quercus cerris*), pedunculate oak (*Quercus robur*), common alder (*Alnus glutinosa*), whitebeam (*Sorbus aria*), small-leaved lime (*Tilia cordata*), and western red cedar (*Thuka plicata*).

5.2.10 Ornamental planting beds were also found across the grassland on site (Figure 6). Species recorded include cotoneaster (*Cotoneaster sp.*), fire thorn (*Pyracantha sp.*), New Zealand flax (*Phormium sp.*), pernicious snowberry (*Symphoricarpos albus*), holly (*Ilex aquifolium*), and spindle (*Eunonumus europpaeus*).

Figure 3: Modified grassland located to the north of the site (Arbtech, October 2024).

Figure 4: Scattered trees located centrally within the site (Arbtech, October 2024)

Figure 5: Line of trees located centrally within the site (Arbtech , October 2024)

Figure 6: Introduced shrub located centrally within the site (Arbtech, October 2024)

Mixed scrub (h3h)

5.2.11 Areas of mixed scrub were present during the PEA undertaken by Arbtech (October 2024) across the site (Figure 7). All sections of scrub were found to be dense, with an absence of open glades or any notable age variation. Species recorded included bramble (*Rubus fruticosus agg.*), hawthorn (*Crataegus monogyna)*, common broom (*Cytisus scoparius*), buddleia (*Buddleja davidii*), ash saplings, oak saplings and holly.

Figure 7: Mixed scrub located to the north of the site

Other woodland; mixed (w1h)

5.2.12 A small section of mixed woodland was present to the north of the existing car park during the PEA undertaken by Arbtech (October 2024) (Figure 8). The woodland was located on a steep bank, which separated the site from the agricultural field adjacent to the north.

5.2.13 Trees recorded within the woodland include ash, hawthorn, spruce (*Picea sp.*), cedar (*Cedrus sp.*), and sycamore. The shrub layer is dominated by bramble, alongside ivy (*Hedera sp.*), and hawthorn saplings. Due to the density of the shrub layer, the ground flora was found to be sparse. Species recorded include common nettle, cleavers (*Galium aparine*), lords and ladies (*Arum maculatum*), ivy, and lesser celandine.

5.2.14 The woodland is not representative of a Woodland Habitat of Principal Importance as listed on schedule 7 of the Environment (Wales) Act.

Figure 8: Mixed woodland to the north of the site

Suburban Mosaic of developed and natural surface; Vegetated garden (u1d 828)

5.2.15 A vegetated garden was found to be associated with B6 to the southeast of the main campus during the PEA undertaken by Arbtech (October 2024). The garden was comprised of frequently mown modified grassland, introduced shrubs, hedgerows, and scattered trees. Species recorded within the garden were consistent with habitats recorded across the college site.

Species-rich native hedgerows associated with banks and ditches (h2a5 50 111)

5.2.16 Species-rich native hedgerows associated with banks and ditches were found along the boundaries of the adjacent agricultural fields and to the east of B6 by Arbtech (October 2024) (Figure 9). Species recorded include hawthorn, hazel, field maple, beech, holly, pedunculate oak, guelder rose (*Viburnum opulus*), blackthorn (*Prunus spinosa*), old man's beard (*Clematis vitalba*), and gorse (*Ulex europaeus*). The ground flora at the base of the hedgerows was limited and comprised species recorded within the modified grassland. The hedgerows enclosing the agricultural fields are associated with an adjacent ditch with an average with of 1m and an average depth of 0.5m; the ditches were dry at the time of site surveys. Given the surveys were

undertaken in early spring and autumn after periods of prolonged wet weather, the ditches are likely to be dry most the year. The hedgerows were found to be representative of the Hedgerow Habitat of Principal Importance as listed on schedule 7 of the Environment (Wales) Act.

5.2.17 Each species-rich native hedgerow associated with banks and ditches were classified as 'important' under the Hedgerow Regulations 1997. This was due to each hedgerow being more than 30 years old, and due to the presence of at least 7 woody species per 30m. Individual numbers and details for each hedgerow were not provided as part of the PEA undertaken by Arbtech (October 2024).

Figure 9: Native hedgerow with associated ditch to the southeast of the site

Species-rich native hedgerows with trees associated with banks and ditches (h2a5 11 50 111)

5.2.18 Species-rich native hedgerows with trees associated with a bank and ditch enclose the east boundary of the field to the east (Figure 10) in addition to the southeast boundary of the current college site adjacent to B6. The hedgerows appear unmanaged and retain a dense and heterogeneous habitat structure. The hedgerows retain an average width of 3m and vary in

height from 2m to 15m. Trees within the hedgerows are mature in age. Species recorded include hawthorn, hazel, field maple, beech, holly, pedunculate oak, guelder rose, blackthorn, and gorse. The ditches associated with each hedgerow were found to have an average width of 1m and an average depth of 0.5m; the ditches were dry at the time of each survey in March and October. The hedgerows were found to be representative of the Hedgerow Habitat of Principal Importance as listed on schedule 7 of the Environment (Wales) Act.

5.2.19 Each species-rich native hedgerow with trees associated with banks and ditches were classified as 'important' under the Hedgerow Regulations 1997. This was due to each hedgerow being more than 30 years old, and due to the presence of at least 7 woody species per 30m. Individual numbers and details for each hedgerow were not provided as part of the PEA undertaken by Arbtech (October 2024).

Figure 10: Native hedgerow with trees along the eastern boundary of the site

Non-native and ornamental hedgerows (h2b)

5.2.20 Non-native ornamental hedgerows were found along the southern and western site boundaries during the PEA undertaken by Arbtech (October 2024) (Figure 11). The non-native ornamental hedgerows were dominated by cherry laurel (*Prunus laurocerasus*) or Lawsons cypress. The

hedgerows were not representative of the Hedgerow Habitat of Principal Importance as listed on schedule 7 of the Environment (Wales) Act. Individual numbers and details for each hedgerow were not provided as part of the PEA undertaken by Arbtech (October 2024).

Figure 11: Non-native and ornamental hedgerow along the southern boundary of the site

5.3 UK Habitat Classification Survey (Brindle and Green, April 2025)

5.3.1 Since the initial site visit undertaken by Arbtech in March and October 2024, the red line boundary of the proposed development has since been extended to include an additional survey area to the south of the existing college. As such, Brindle and Green was instructed by HSP Consulting in 2025 to undertake a PEA of the additional survey area, to inform the Ecological Impact Assessment.

5.3.2 A UK Habitat Classification Survey Map of the southern section of the application site (to the south of Pibwrlwyd Lane) is presented in Appendix 1b of this report. The habitat descriptions below should be read in conjunction with the UK Habitat Classification plan and the Target Notes in Appendix 2.

5.3.3 A plant species list for those plants identified during the field survey is provided in the Target notes within Appendix 2.

5.3.4 Table 9 below provides a list of habitat types present on site along with their inclusion (or otherwise) as a National and / or Local Habitat of Principle Importance (HPI) (Previously referred to as Biodiversity Action Plan (BAP)).

Table 9: UK Habitat Types found on site and inclusion within UK BAP / HPI

Habitat Type	N HPI	L HPI	N/A
Other neutral grassland (g3c)			✓
Other broadleaved woodland (w1g)			✓
Mixed scrub (h3h)			✓
Developed land; sealed surface (u1b)			✓

Other neutral grassland; scattered trees (g3c 32)

5.3.5 An area of other neutral grassland was identified around the existing car park to the south of Pibwrlwyd Lane (Figure 12). The grassland appeared to be frequently mown to a sward height of approximately 50mm. Grassland species recorded included abundant cock's foot and Yorkshire fog, frequent sweet vernal grass (*Anthoxanthum odoratum*), as well as occasional red fescue (*Festuca rubra*) and meadow foxtail (*Alopecurus pratensis*).

5.3.6 Herb species pertained to abundant dandelion sp., ribwort plantain, and creeping buttercup, alongside frequent meadow buttercup (*Ranunculus acris*), common daisy (*Bellis perennis*), violet sp. (*viola sp.*), broadleaved dock, and Himalayan balsam (*Impatiens glandulifera*). Common ivy (*Hedera helix*), cow parsley (*Anthriscus sylvestris*), cleavers (*Galium aparine*), lesser celandine, common knapweed (*Centaurea nigra*), shield fern (*Polystichum sp.*), creeping vetch (*Securigera varia*), birds foot trefoil (*Lotus corniculatus*), common ragwort (*Jacobaea vulgaris*), wild strawberry (*Fragaria vesca*), cowslip (*Primula veris*), soft rush (*Juncus effusus*), lords-and-ladies were all recorded occasionally within the grassland.

5.3.7 Scattered trees (Figure 13) were present throughout the grassland, with trees ranging from young to semi-mature. As such, the secondary codes '32 - scattered trees') was applied to the grassland on site. Tree species recorded on site are mostly native alongside occasional ornamental specimens. Species recorded throughout the site included alder, cherry, silver birch, and Leylandii cypress.

Figure 12: Other neutral grassland located around the existing car park


Figure 13: Scattered trees located within the other neutral grassland

Other woodland; broadleaved (w1g)

5.3.8 A small section of broadleaved woodland was present to the south of the site (Figure 14). Canopy trees recorded within the woodland included abundant cherry and alder, frequent pedunculate oak, plane (*Platanus sp.*), goat willow, alongside occasional field maple, holly, and elder. The shrub layer consisted of abundant bramble, frequent dogwood (*Cornus sanguinea*), and occasional honeysuckle (*Lonicera periclymenum*). Ground flora species recorded included abundant wood avens (*Geum urbanum*), common nettle, harts tongue fern (*Asplenium scolopendrium*), frequent ground ivy (*Glechoma hederacea*), common ivy, common sedge (*Carex nigra*), Himalayan balsam, lords-and-ladies, and occasional ragged robin (*Silene flos-cuculi*), bluebell (*Hyacinthoides non-scripta*), and lesser celandine.

5.3.9 The woodland was not considered to be representative of a Woodland Habitat of Principal Importance as listed on schedule 7 of the Environment (Wales) Act.

Figure 14: Broadleaved woodland to the south of the site

Mixed scrub (h3h)

5.3.10 A small area of mixed scrub was found to the immediate south of Pibwrlwyd Lane (Figure 15). This scrub parcel was comprised of abundant *viburnum sp.*, bramble, and bamboo (*Bambusa sp.*), alongside frequent dogwood.

Figure 15: Mixed scrub located to the south of Pibwrlwyd Lane

Developed land; sealed surface (u1b)

5.3.11 Developed land; sealed surface is present in the form of an existing tarmac car park. No vegetation was noted within this habitat parcel.

Figure 16: Existing car park located within the centre of the additional survey area.

Invasive Species

5.3.12 An assessment of the site was made to establish the presence of invasive weeds included on schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

5.3.13 Himalayan balsam and cotoneaster sp., both schedule 9 species, was recorded across the site. It is an offence to facilitate the spread of invasive species which are listed on schedule 9 of the Wildlife And Countryside Act. Snowberry was also recorded throughout the site, which whilst not listed under Schedule 9 of the Wildlife and Countryside Act 1981, this plant species is invasive in nature with the potential to damage hard landscaping features and outcompete desirable plant assemblages.

Site Evaluation

5.3.14 The habitats on site have been evaluated as being of low ecological value in relation to the local surroundings and assessed to have 'District' value in a regional context (Table 2). The site to the north of Pibwrlwyd Lane was dominated by existing buildings, with associated parking and landscaping in the form of well-managed and mown modified grassland, scattered trees, mixed scrub and introduced shrubs. A small area of mixed woodland was found to the north of the site

and a small area of broadleaved woodland was found to the south of the site, but both were not considered to be representative of woodland HPI under Schedule 7 of the Environment (Wales) Act, due to the lack of species diversity and an established ground flora layer.

5.3.15 The hedgerows across the site provided value to terrestrial species, and all native hedgerows are UK Biodiversity Action Plan (BAP) priority habitats and are Habitats of Principle Importance under Schedule 7 of the Environment (Wales) Act.

5.4 Protected and Notable Species

Breeding Birds

5.4.1 The zone of influence for breeding birds pertains to the suitable habitats located within the application site and immediately adjacent to its boundary.

5.4.2 The extensive areas of modified and other neutral grassland, hedgerows, scattered trees, broadleaved and mixed woodland, and native scrub within the application boundary supported suitable nesting and foraging habitat for a wide range of bird species, including chaffinch (*Fringilla coelebs*), song thrush (*Turdus philomelos*), and dunnock (*Prunella modularis*).

Evaluation

5.4.3 The site was considered to have 'Local Value' to breeding birds. While, not uncommon within the wider landscape, the areas of grassland, woodland, scattered trees and hedgerows within the application boundary hold value for nesting birds including some species considered to be of high conservation concern that are either legally protected or UK BAP species.

Bats

5.4.4 Habitats within the application boundary were considered suitable for roosting, foraging and commuting bats. The zone of influence for bats is considered to be within the redline boundary and connective adjacent habitats. Environmental data from the West Wales Biodiversity Information Centre returned records indicating the presence of several bat species on and within 2km of the site including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), noctule (*Nyctalus noctula*), Daubenton's (*Myotis daubentonii*), and whiskered (*Myotis mystacinus*) (Arbtech, October 2024).

5.4.5 Following BCT guidance (Appendix 5), the site was assessed as providing 'moderate' suitability habitat for commuting and foraging bats with areas of broadleaved and mixed woodland and mature hedgerows, located along the boundaries of the application site, offering optimal connectivity with the wider landscape.

5.4.6 Scattered trees were recorded throughout the application site. Visible trees were assessed and categorised based upon Bat Conservation Trust guidance (Appendix 5). All of the assessed trees within the application site or adjacent to its boundary were considered to offer 'Negligible' suitability for roosting bats, except for four trees. Trees 9, 45, and 64 were all assessed to have PRF-M suitability, whilst Tree 50 was assessed to have PRF-I suitability for individual bats. The trees and the features evident on each are discussed within Appendix 8a.

5.4.7 Six buildings were recorded within the application boundary. Buildings 1, 2, 3, 4, and 6 were considered to offer roosting features of 'High' suitability and three further dusk emergence surveys were recommended to establish the presence/likely absence of roosting bats within these features. Building 5 was considered to offer roosting features of 'Moderate' suitability and two further dusk emergence surveys were recommended to establish the presence/likely absence of roosting bats within these features. The buildings and the features evident on each are discussed within Appendix 8b.

Bat Presence / Absence Surveys

5.4.8 Dusk emergence surveys were carried out on Buildings 1 - 6, and on Trees T9, T45, and T64 between May and August 2025. No roosting bats were identified within B4, B5, T9, T45, and T64 following the entire suite of bat emergence surveys in 2025. A total of 12 roosts, of varying classifications, size, and species, were identified across the site (Table 10). A map detailing the location and classification of each roost can be found in Appendix 8b.

Table 10: Total Number and Description of Roosts found during the suite of bat emergence surveys.

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification
1	1	Common pipistrelle	Roost located within a black bat box externally mounted on the southern elevation of the tower block on B1 (Grid reference: SN 41130 18308). Roost found to support a peak count of 1 common pipistrelle.	Day Roost

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification
1	2	Common pipistrelle	Roost located within a black bat box located on the north-eastern corner of B1 (Grid reference: SN 41135 18333). Roost found to support a peak count of 1 common pipistrelle.	Day Roost
1	3	Common pipistrelle	Maternity roost located under PVC cladding on northern elevation of B2 (Grid reference: SN 41124 18338). A peak count of 16 common pipistrelle bats seen emerging and re-entering the roost.	Maternity Roost
2	4	Common pipistrelle	Roost located under wooden eaves beneath the pitched roof on the northern elevation of B2 (Grid reference: SN 41051 18322). Roost found to support a peak count of 3 common pipistrelles.	Day Roost
2	5	Soprano pipistrelle	Roost located under concrete ridge tile on the western gable end of B2 (Grid reference: SN 41061 18319). A peak count of 33 soprano pipistrelle bats seen emerging and re-entering the roost.	Maternity Roost
2	6	Common pipistrelle	Roost located under wooden eaves on western gable end of B2 (Grid reference: SN 41045 18316). Roost found to support a peak count of 3 common pipistrelles.	Day Roost
3	7	Pipistrelle sp.	Roost located within externally mounted bat box on the western gable end of B3 (Grid reference: SN 41031 18282). Roost found to support individual pipistrelle sp. No echolocation when emerging, but based on observations of the size and flight pattern, was assessed to be pipistrelle sp.	Day Roost
3	8	Pipistrelle sp.	Roost located within externally mounted bat box on the western gable end of B3 (Grid reference: SN 41032 18271). Roost found to support individual pipistrelle sp. No echolocation when emerging, but based on observations of the size and flight pattern, was assessed to be pipistrelle sp.	Day Roost
3	9	Soprano pipistrelle	Roost located within externally mounted bat box on the western gable end of B3 (Grid reference: SN 41031 18282). Roost found to support a peak count of 1 soprano pipistrelle.	Day Roost

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification
3	10	Soprano pipistrelle	Roost located within externally mounted bat box on the western gable end of B3 (Grid reference: SN 41032 18271). Roost found to support a peak count of 1 soprano pipistrelle.	Day Roost
6	11	Soprano pipistrelle	Roost located within externally mounted bat box on the eastern elevation of B6 (Grid reference: SN 41247 18286). Roost found to support a peak count of 1 soprano pipistrelle.	Day Roost
6	12	Pipistrelle sp.	Roost located within externally mounted bat box on the eastern elevation of B6 (Grid reference: SN 41247 18286). Roost found to support individual pipistrelle sp. No echolocation when emerging, but based on observations of the size and flight pattern, was assessed to be pipistrelle sp.	Day Roost

5.4.9 Building 1 was found to support two common pipistrelle day roosts, located within externally mounted bat boxes on the southern elevation of the tower block (Roost 1) and northeastern elevations (Roost 2) of the building, as well as a common pipistrelle maternity roost (Roost 3), located under a gap in the PVC cladding in the northeastern corner of the building, which supported a moderate number of bats (peak count of 16).

5.4.10 Building 2 was found to support one common pipistrelle day roost (Roost 4) and a common pipistrelle day roost (Roost 6), both of which were located under gaps in the wooden eaves of B2 along its northern and western elevations. A soprano pipistrelle maternity (Roost 5) was also identified under a gap in the wooden eaves of the western gable end of B2, which supported a moderate number (peak count of 33) of soprano pipistrelles recorded during the survey undertaken on the 19th May.

5.4.11 Bat surveys were undertaken on B1 and B2 on the 19th May, 30th June, and 28th July 2025. During the suite of emergence surveys undertaken on B1, bat activity commenced on site before sunset, with moderate levels of activity recorded around the maternity roost (Roost 3), where multiple emergences and re-entries were noted on all three surveys. A peak count of 16 common pipistrelles were observed emerging from Roost 3 on the 19th May, with numbers dropping during the later surveys. Continuous common pipistrelle activity was recorded during all three surveys before sunset and through to the end of each survey. An individual common pipistrelle

was observed emerging from Roost 1 on the 19th May and 30th June, whilst an individual common pipistrelle was seen emerging from Roost 2 on the 19th May and 28th July.

5.4.12 For B2, bat activity commenced on site before sunset, with moderate levels of activity recorded around the maternity roost (Roost 5), where multiple emergences and re-entries were noted during the first survey. A peak count of 33 soprano pipistrelles were observed emerging the maternity roost on the 19th May, with numbers dropping in the following surveys. Continuous soprano pipistrelle activity was recorded around the maternity roost between 21:38 to 21:45 during the first survey. Foraging activity was also record across all three surveys to the north and south-west of B2. Three common pipistrelle bats were seen emerging from Roost 4 during the second and third survey (30th June and 28th July) and were not observed during the first survey, suggesting this location is used as a day roost. Small numbers of common pipistrelle was observed emerging from Roost 6 on all three surveys, with a peak count of three recorded during each survey.

5.4.13 Bat surveys were undertaken on B3 and B4 on the 19th May, 30th June, and 14th July 2025. Building 3 was found to support two pipistrelle sp. day roosts (Roosts 7 and 8) and two soprano pipistrelle day roosts (Roosts 9 and 10), located within externally mounted bat boxes on the western elevation of the building. During the suite of emergence surveys undertaken on B3, bat activity commenced on site 17 minutes after sunset during each survey, with low levels of activity recorded around Roosts 7, 8, 9, and 10. One pipistrelle sp., which was observed inside Roost 7 prior to the first survey on the 28th May, did not emerge, and this may have been attributed to cold and wet weather conditions before the survey commenced. The bat was found to still be present within the roost at the end of the survey, and as bats were seen commuting and foraging during the survey, it was considered that the survey remained optimal. Additionally, an individual pipistrelle sp. was observed emerging from Roost 8 on the 28th May. No emergences were recorded during the second survey on the 18th June. Individual soprano pipistrelles were observed emerging from Roost 8, and Roost 10 during the third survey.

5.4.14 Foraging activity was considered to be low throughout each of the three surveys and pertained to individual soprano pipistrelles utilising the mature hedgerows and hedgerows with trees within the centre of the site.

5.4.15 Bat activity during the surveys on B4 commenced on site 25 minutes after sunset, with low levels of activity recorded around the building, pertaining to individual common and soprano

pipistrelles commuting and foraging around the building. A small number of heard not seen passes of noctule were recorded during the first, second, and survey, and no roosting bats were identified during all three surveys undertaken on B4.

5.4.16 Bat surveys were undertaken on B5 on the 11th June and 8th July 2025. Bat activity during the surveys on B5 commenced on site 30 minutes after sunset, with low levels of activity recorded around the building, pertaining to individual common and soprano pipistrelles commuting over the building. A small number of heard not seen noctule passes were recorded during the second survey, and no roosting bats were identified during both surveys on B5.

5.4.17 Building 6 was found to support one soprano pipistrelle day roost (Roost 11), and one pipistrelle sp. day roost (Roost 12) located within an externally mounted bat box on the eastern elevation of the building. Bat surveys were undertaken on B6 on the 11th June, 8th July, and 12th August 2025. Bat activity during the surveys on B6 commenced on site 5 minutes after sunset, with low levels of activity recorded around the building, pertaining to individual common and soprano pipistrelles commuting and foraging around the building. A moderate number of heard not seen noctule passes were recorded during the third survey.

5.4.18 Trees T9, T45, and T64 were surveyed on the 30th June, 22nd July, and 12th August 2025. No roosting bats were identified in any of the trees. Activity levels around T9 were found to be relatively low, with occasional commuting and foraging passes of common and soprano pipistrelle recorded throughout the suite of emergence surveys. Trees T45 and T64 in comparison recorded moderate levels of common pipistrelle, soprano pipistrelle, and noctule foraging and commuting activity, with bats seen utilising the mature hedgerow with trees in the centre of the site during all three surveys. As this hedgerow is unlit at night, this suggests that this linear feature may be an important commuting and foraging corridor within the site and to the wider landscape.

Foraging and Commuting Bats

5.4.19 The data search highlighted bat activity within the zone of influence, and a low conservation value roost within the red line boundary. The site supported features considered suitable for commuting and foraging bats along the northern, eastern, western, and southern boundaries and scattered trees and species rich hedgerows which dissected the site. The habitat features on and adjacent to the site were awarded 'moderate' potential to support foraging and commuting bat populations, and as a result, three transect surveys were recommended over

three seasons (Spring, Summer, and Autumn). To date, two transect surveys have been undertaken (Spring and Summer), where one walked transect route has been utilised supporting three remote detectors along the route . The third (Autumn) transect is due to be undertaken in mid-September, once completed in September/October 2025, the results of transect surveys as a whole will be detailed in an updated EcIA report.

Evaluation

5.4.20 The site has been assessed as being of 'County Value' for roosting bats following assessment (Wray et al 2010), due to the presence of a common pipistrelle maternity roost within B1 and a soprano pipistrelle maternity roost within B2. Common and soprano pipistrelles are both considered to be 'common' within Wales, and following guidance set out by Wray et al. (2010), a site supporting maternity site for common species is therefore assessed to have 'county' value. Moderate levels of common pipistrelle, soprano pipistrelle, and noctule activity were also recorded along the central hedgerow with trees, this also suggests that this linear feature is of elevated importance for bats both within the site and within the wider landscape.

5.4.21 For foraging and commuting bats, following best practice guidance (Collins, 2023), and an assessment of the habitats on site, it was considered that the site offered 'moderate' suitability. Habitats including the hedgerows, modified grassland and woodland edge were all considered to have potential to provide commuting and foraging habitat for a variety of bat species. It should be noted that updated bat activity surveys are due to be undertaken within the application boundary in 2025. Once completed, the ecological value of the site for commuting and foraging bats can be determined.

Amphibians

5.4.22 The zone of influence for great crested newts (*Triturus cristatus*) and other amphibians was determined following the desk study. A radius of 500 metres was searched for the presence of suitable waterbodies to support great crested newts using 4 different methods (OS Mapping via Pro Map, Google Earth Pro, Google Maps and an On-Site Walkover).

5.4.23 Habitats recorded on site are assessed to provide foraging, commuting, and refuge opportunities for amphibians. The hedgerows, scrub, and woodland provide elevated value for amphibians as these habitats provide a suitable structure for refuge and hibernation in addition to foraging and commuting opportunities.

5.4.24 No ponds were found located within the site, and all ditches were considered to be dry all year round. As such, there are no breeding opportunities for great crested newts and other common amphibians on site. A review of aerial imagery and Magic maps identified two ponds within 500m of the site, one located 340m west (Pond 1)and the second located 450m northwest (Pond 2). However, these ponds were not assessed to have suitable terrestrial connectivity to the site for amphibians due to separation by the River Twyi and urban infrastructure including tarmac roads and commercial development which represent significant barriers to dispersal.

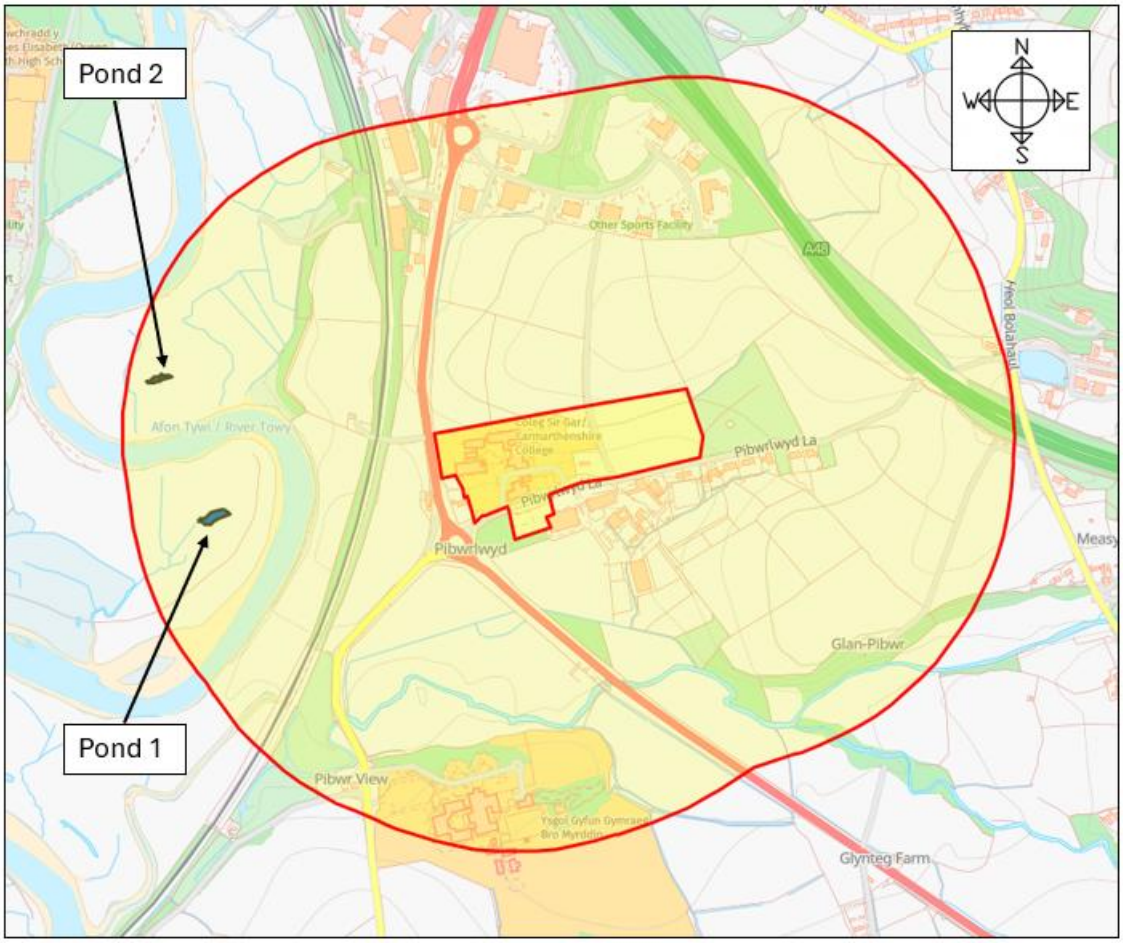


Figure 17: OS Map showing pond locations within a 500-metre radius of the site. Grid references and further detail on their suitability for GCN are evaluated in Table 8

Table 11: Pond Locations and Suitability for Great Crested Newts.

Pond No.	Grid Ref.	Habitat Suitability Index Score (Appendix XX)	Distance from Site
1	SN 4064 1819	Not accessed during preliminary appraisal – situated on private land and disconnected from the site by terrestrial barriers	340m west

Pond No.	Grid Ref.	Habitat Suitability Index Score (Appendix XX)	Distance from Site
2	SN 4055 1841	Not accessed during preliminary appraisal – situated on private land and disconnected from the site by terrestrial barriers	450m northwest

Evaluation

5.4.25 Habitats within the application boundary, including the grassland, hedgerows, dry vegetated ditches, are suitable to support the terrestrial phase of the great crested newt lifecycle. However, two waterbodies (Ponds 1 and 2) were identified within 500m of the site, which were both considered to be disconnected from the site by major watercourses and urban infrastructure. As such, no further presence/absence surveys were recommended for GCN, and amphibians are subsequently scoped out of further assessment within this report.

Reptiles

5.4.26 The zone of influence for reptiles was considered to be within the site and 500m of connective habitat. The undulating topography of the grassland in the field to the east of the site provided suitable basking habitat, and its variable sward structure provided shelter to support reptiles. In addition, the site was well connected to the surrounding landscape by hedgerows and ditches, particularly to the west and the south.

5.4.27 Although no evidence of reptiles was found onsite at the time of the PEA and the data search returned no records of reptiles within 2km of the site, the extensive and variable habitats onsite had the ability to support reptile populations, particularly grass snake (*Natrix helvetica*) and slow-worm (*Anguis fragilis*). Therefore, the decision was made to carry out reptile surveys to determine the presence or likely absence of these species onsite.

5.4.28 The reptile survey showed no evidence to suggest that there was a permanent population of reptiles onsite. The survey results are presented within Table 12 below:

Table 12: Results of the seven visits undertaken during June - September 2017 (Refugia Locations can be found within Appendix 8e)

Survey Date / Time	Temp °C	Cloud Cover	Humidity %	Wind Speed	Findings
11/04/2025 10:30	15	1	80%	BF2	No Reptiles

Survey Date / Time	Temp °C	Cloud Cover	Humidity %	Wind Speed	Findings
17/04/2025 11:00	12	4	80%	BF1	No Reptiles
24/04/2025 10:45	14	5	77%	BF2	No Reptiles
02/05/2025 08:00	15	6	70%	BF2	No Reptiles
13/05/2025 09:45	18	3	77%	BF2	No Reptiles
02/06/2025 09:50	16	2	60%	BF2	No Reptiles
17/06/2025 09:30	17	7	80%	BF3	No Reptiles

Evaluation

5.4.29 Following seven survey visits no reptiles were recorded within the suitable habitat onsite, confirming that the optimal habitat on site provides 'Site Value' for this protected species group, following evaluation criteria (Table 2). The lack of survey findings suggests that it is highly unlikely that a population of reptiles exists within the application boundary or within connective habitat adjacent to the site.

Badger

5.4.30 The zone of influence relating to badgers was considered to be within the application site and the immediate connective habitat. Environmental data from the West Wales Biodiversity Information Centre returned five records indicating the presence of badgers within 2km of the site, the nearest located 0.77km south of the site (Arbtech, October 2024).

5.4.31 No evidence of badger setts, or activity such as mammal runs, snuffle holes and latrines were found during the ecological appraisal of the site and badger survey undertaken by Brindle and Green in April 2025. The application site supported habitat features such as thick hedgerows and ditches which provide suitable commuting habitat for this transient species, which are highlighted as present in the wider environment following a review of the data search. As a result of the site extent and the location within an agricultural dominated landscape it is considered that badgers could use the site for foraging and commuting purposes on an episodic basis but are not likely dependant on the site.

Evaluation

5.4.32 The site supports suitable connective and foraging habitat for badgers of 'Local value'. Badgers are considered to be absent from the site; however, the transient nature of this species could result in individuals foraging or commuting through the zone of influence of the proposed development.

Hazel Dormouse

5.4.33 The zone of influence for dormice was determined to be habitats within the redline boundary and ecologically connected habitat within the wider estate. The data search returned no records of hazel dormouse within 2km of the application site. Furthermore, no granted EPS development licences for hazel dormouse were returned within 2km of the site.

5.4.34 Dormouse surveys have been carried out between May and August 2025, and are ongoing until September 2025, which will result in a probability score of 21 (minimum survey effort score = 20). The survey revealed evidence of dormice within one nest tube along the eastern boundary hedgerow, which is connected to nearby areas of woodland to the east of the site. Evidence of nesting material was recorded during the suite of surveys, and one adult dormouse was observed leaving the nest tube in June 2025.

Evaluation

5.4.35 Following survey effort, hazel dormice were confirmed to be present along the eastern boundary hedgerow of the site. Surveys are ongoing until the end of September, and an evaluation of the site's value for hazel dormouse will be detailed upon completion of the surveys.

Mammal Species of Principle Importance

5.4.36 The Environment (Wales) Act, Section 7 highlights 175 species of principle importance within Wales. Although these species were not surveyed directly as a result of their distribution and habitat preferences, evidence for activity by these species was searched for during the Phase 1 habitat and Phase 2 protected species surveys.

5.4.37 The zone of influence was considered to be within ecological connective habitat along the boundaries of the site, within 30 metres of the boundary.

5.4.38 Common pipistrelle, soprano pipistrelle, and common noctule, all of which are species of principal importance, were found to be commuting and foraging on site, predominately along the treeline and hedgerows within the centre and to the east of the site (Appendix 8c).

5.4.39 The site also offered habitat capable of supporting foraging and commuting West European hedgehog, namely the modified and other neutral grassland, mixed scrub , areas of woodland adjacent to the western boundary, and the hedgerows defining the site boundaries. However, no evidence of activity was found during the initial PEA or the subsequent phase two surveys.

Evaluation

5.4.40 An evaluation of common pipistrelle, soprano pipistrelle, and noctule distribution on site can be found within Section 5.3.3.

5.4.41 The habitats considered suitable for foraging West European Hedgehog pertained to areas of woodland edge, hedgerows, scrub and the modified and other neutral grassland. Overall, the habitats within the application boundary offered 'Local' value to this species group.

6 Assessment of effects and mitigation measures

6.1 The proposed development

6.1.1 The site is the subject of a full application seeking to facilitate the demolition of the existing college campus, and development of new college blocks with associated parking, access and landscaping. It is understood that the proposals will involve significant ground clearance as well as the demolition of existing buildings. Detailed design proposals are presented within Appendix 6 of this report. The indicative plan suggests that most of the hedgerows and areas of woodland which border the site will remain intact and will be unaffected by the development. There are opportunities for habitat creation across the site where areas of open space have been proposed (Appendix 6).

6.2 Potential Impacts to habitats and notable species on site

6.2.1 Where evaluations within Section 5 have highlighted potential constraints to protected and notable species or habitats further assessment has been made to quantify the effect of the potential constraints. Plants are not considered further within this section as they not considered to be a constraint to the application.

Designated sites

6.2.2 Direct impacts on nearby designated sites as a result of the proposed development are considered unlikely. However, there is the potential for indirect impacts (i.e. increased drainage run-off) particularly on Carmarthen Estuaries SAC, located 730m southwest from the application boundary. It is currently understood, based on condition assessments undertaken by Natural Resources Wales (NRW) (NRW, 2025), that high nutrient levels have been recorded at Carmarthen Bay and Estuaries SAC and the estuary is currently at an 'unfavourable condition'. Any new developments leading to an increase in nitrogen discharges directly to, or catchments draining to these sites, could further contribute to the unfavourable condition of the SAC and/or undermine measures to restore these features.

6.2.3 Based on the proposed plans provided in Appendix 6, the proposed development will result in the demolition of the existing school buildings, and the construction of four new school buildings, which will increase the runoff and discharge from the site. Therefore, as the site falls within the

catchment for Carmarthen Estuaries SAC and is likely to increase drainage into this designated site, a Habitats Regulations Screening Assessment is required to assess whether the proposed development will have a 'likely significant effect' on Carmarthen Estuaries SAC.

Mitigation Measures

6.2.4 Due to the site's proximity to Carmarthen Estuaries SAC, and the potential for the proposed development to indirectly impact the habitats for which this site is designated, consultation with Natural Resources Wales is required to assess whether the proposed development will have a 'likely significant effect' on the SAC. This consultation will be undertaken as part of the Habitat Regulations Assessment (HRA) for the proposed development, and following consultation, mitigation measures to safeguard this internationally designated site will be developed and updated in an updated EcIA report.

Habitats

6.2.5 The hedgerows to the east and west of the site, are to be retained following the development. However, significant ground clearance will be required within the application boundary to facilitate the new development of the college which will result in the loss of other neutral grassland, modified grassland, introduced shrub, scattered trees, and hedgerows within the centre of the site. Whilst the majority of the remaining habitats onsite were considered to be of relatively low value, the overall matrix of habitats consisting of the species-rich hedgerows and scattered trees holds intrinsic value to local biodiversity.

6.2.6 The site was identified to support Himalayan balsam and cotoneaster sp., which are both listed as 'invasive non-native species' under Schedule 9 of the Wildlife and Countryside Act 1981. It is an offence to facilitate the spread of these invasive species, and in the absence of mitigation, this presents a Negative (Not significant) impact. Through management and removal of this species by a qualified person, the effect will be reduced to Neutral (not significant) impact.

Mitigation Measures

6.2.7 To mitigate for the loss of other neutral and modified grassland, scattered trees, and hedgerows across the site, areas of open space should be developed and managed for biodiversity, with enhancements, including replanting of trees and grassland incorporated into the landscape plans.

6.2.8 Areas of open space should be managed following a strategy outlined in a supporting Green Infrasturcture Statement to prevent the encroachment of pernicious species and to benefit local wildlife. These actions will ensure that the residual effect on habitats as a result of ground clearance is resolved with Neutral (not significant) results.

Breeding Birds

6.2.9 The areas of modified and other neutral grassland, hedgerows, scattered trees, woodland, native scrub and buildings within the application boundary have been identified as being suitable for use by breeding birds. A Likely Negative (Not significant) effect is anticipated as a result of the development through the loss of suitable nesting habitat, potential disturbance of nests, and the potential harm/injury/death of nesting birds within the breeding season. This impact is considered to be short term and reversible with the following mitigation in place.

Mitigation Measures

6.2.10 Given their protection, development must be sympathetic to the value of this habitat and potential impacts on breeding birds, their eggs, nests and young. The breeding bird season is generally accepted as being between March and September, works should be avoided during this period where possible, and developers should consider and implement the options (below) appropriate to their scheme to reduce the effect to Neutral (Not significant):

- Undertake demolition works to Buildings 1 to 6 and any vegetation clearance between the months of October and February where possible (Outside of the breeding season);
- Any vegetation proposed for removal between the months of March and September should be subjected to a search for active birds' nests 24 hours prior to commencement of works. This should confirm whether all or some clearance is achievable.
- If the demolition of Buildings 1 to 6 are to be undertaken between the months of March and September, the building should be subjected to a search for active birds' nests 24 hours prior to commencement of works. If birds are found to be nesting, works will need to be delayed in those areas until it is confirmed that nesting has been completed. This should confirm whether all or some clearance is achievable.
- In addition to a pre-works check the clearance of vegetation between the months of March and September should be supervised by a suitably qualified ecologist;

- Should bird nesting activity occur within the application site during any works then activity in that area will cease until the bird(s) have vacated the site (a minimum of 4 weeks). Such measures should be adhered to so as to prevent unnecessary disturbance to breeding birds or their young.

Roosting Bats

6.2.11 No roosting bats were identified within Buildings 4 and 5, and within trees T9, T45, and T64. However, a total of 12 roosts were found across the site (Appendix 8b), which were identified across Buildings B1, B2, B3 and B6.

6.2.12 Building 1 was found to support two common pipistrelle day roosts (Roosts 1 and 2) and a common pipistrelle maternity roost (Roost 3) which supported a moderate number of bats.

6.2.13 Building 2 was found to support one common pipistrelle day roost (Roost 4) and a common pipistrelle day roost (Roost 6), and a soprano pipistrelle maternity (Roost 5) was also identified under a gap in the wooden eaves of the western gable end of B2, which supported a moderate number of bats.

6.2.14 Building 3 was found to support two pipistrelle sp. day roosts (Roosts 7 and 8) and two soprano pipistrelle day roosts (Roosts 9 and 10), located within externally mounted bat boxes on the western elevation of the building.

6.2.15 Building 6 was found to support one soprano pipistrelle day roost (Roost 11), and one pipistrelle sp. day roost (Roost 12) located within an externally mounted bat box on the eastern elevation of the building.

6.2.16 The detailed plans suggest that all the buildings on site are to be demolished in order to facilitate the development. Therefore, in the absence of appropriate mitigation, the demolition of Buildings B1 and B2, B3 and B6 would result in the destruction of known roosts supporting a moderate number of breeding bats of a moderate conservation value resulting in a Negative (Not Significant) effect upon local bat populations. Additionally, in the absence of appropriate mitigation, the demolition of Buildings B3 and B6 would result in the destruction of known roosts supporting a low number of non-breeding bats of a low conservation value resulting in a Negative (Not Significant) effect upon local bat populations.

Mitigation Measures

6.2.17 As the proposed development will involve the destruction of a common pipistrelle maternity roost within B1, a soprano pipistrelle maternity roost within B2, and a number of day and day roosts across the site, a Natural Resources Wales Bat Licence must be secured in order to continue with development works. The recommendations below outline suggested mitigation work to be included within the method statement to support the application, and it is considered that this will reduce the effect to Neutral (Not significant). Due to the presence of two maternity roosts within the site, works cannot be undertaken during the maternity season (considered to be May to August) and must be undertaken within the transitional period (October) when bat species such as common pipistrelle are likely to be absent from buildings.

6.2.18 To mitigate for the losses of two maternity roosts on site, bespoke mitigation will be required, the specifics of which are currently being discussed and design in collaboration with the architects for the development. The mitigation for the maternity roosts is likely to be formed of a series of internal bat lofts and/or crevices, depending on the elevations, external building materials, and internal structures of each building.

6.2.19 To mitigate for the loss of the day roosts on B3, B4, during construction externally mounted and/or integrated bat boxes (such as should be positioned on the elevations of each new building facing a south – south easterly direction at a height of above 4 metres. Placement will be confirmed by an ecologist on submission of the licence.

6.2.20 To provide additional roosting opportunities for common bat species and mammals of principle importance, oak Kent boxes should be installed on large, retained trees along commuting routes. Boxes should be integrated around the site, in clusters facing in a southerly, easterly or westerly direction, above 5 metres in height. The specific location of bat mitigation should be secured within a Landscape Ecological Management Plan (LEMP).

- Depending on the timing of works, a pre-dawn emergence survey may be undertaken on the day of soft stripping to confirm absence of bats within the building.

- On the day of soft stripping the ecologist will provide a toolbox talk to contractors prior to works. Bat roosting features should be soft stripped under the supervision of the Named Ecologist. Should bats be encountered during soft stripping then they will be captured by hand and relocated to pre-installed temporary bat box. Once all bat roosting features have

been stripped, checked and structures made unsuitable for roosting bats the buildings can be declared free of bats. Development works can then proceed without ecological supervision. Temporary bat boxes to remain in place during this period, and post construction for enhancement purposes.

- Should the removal of any suitable trees be required to facilitate the development, between the months of April and October, a pre-works inspection should be carried out to determine the extent of any features present. Subsequent removal of any suitable trees should be undertaken following the 'soft-felling' methodology. 'Soft-Felling' involves removing the limbs of the tree and carefully lowering them to the ground. Limbs should be left undisturbed for at least 24 hours to allow any bats to disperse. Wherever possible, sections of the tree holding potential roosting features should be secured to suitable host trees, as close as possible to where the original tree stood. This ensures that potential roosting sites are retained.

- Bats are highly mobile and can change roost sites throughout the year and from season to season. If the development of the site does not begin within twelve months of this initial survey it will be necessary to conduct updated surveys to determine if the extent of any changes to roosts within Buildings 1 to 6 and to Tree 45.

- **It must be noted that the failure of the client, or anyone working under the client's direction, to follow the method statement may result in a breach of legislation.**

Foraging and Commuting Bats

6.2.21 Based on the current design plans, it is understood that whilst the majority of hedgerows to the east will be retained, a number of mature hedgerows and treelines to the south and within the centre of the site will be lost. The clearance of these linear habitats along with the levels of disturbance (i.e. noise, increased security lighting, etc.) likely to occur both during and post construction constitute a Likely Negative (Not Significant) impact upon foraging and commuting bats.

6.2.22 At the time of writing, two bat activity transects have been completed in Spring and Summer, with an autumn transect due to be undertaken in mid-September 2025. Once completed, the ecological value and importance of habitats within the site for roosting, commuting and foraging bats can be determined.

Mitigation Measures

6.2.23 Following the completion of bat activity surveys in 2025, further details on mitigation measures required for foraging and commuting bats will be updated within an updated EcIA report.

6.2.24 To mitigate effects to commuting and foraging bats to Neutral (Not significant), the physical characteristics and current management of the boundary features should be maintained and where possible enhanced. Where vegetation has been proposed for removal, compensatory planting should be undertaken. The details of planting and enhancements should be secured within a LEMP which seeks retention and enhancement of locally prevalent features within areas of public open space and retain linear features.

6.2.25 The extent of disturbance to bat commuting lines should be reduced where possible by removing vegetation outside of the bat activity season and employing a sensitive lighting scheme during construction works. Post construction, artificial security lighting should not be installed on the elevations of buildings in close proximity to hedgerows and the areas of mixed and broadleaved woodland, preventing long-term disturbance to commuting lines. If flood lighting is required, this should be directed away from notable habitat for bats and overspill into dark corridors and woodland should not exceed 1lux.

Reptiles

6.2.26 Whilst no reptiles were identified within the application site following surveys undertaken in May and June 2025, given the suitability of the habitat matrix on site it remains possible that reptiles may utilise the habitats within the application site on an intermittent basis. In the absence of mitigation direct harm or injury could be sustained to individuals during ground clearance posing a Negative (not significant). The loss of suitable habitat provides a Neutral (not significant) effect on the reptile population, because the effect is considered to be short term and reversible on site, and there is an abundance of suitable habitat within the immediate landscape.

Mitigation Measures

6.2.27 The following reasonable avoidance measures should be secured within a Construction Environmental Management Plan – Biodiversity (CEMP) and followed during the construction phase to prevent reptiles colonising any potential habitat incidentally created by spoil, open trenches or arisings.

- Any tall grass/ruderal vegetation to be directionally strimmed in a two-phase process during the active season (March – October) to allow for any potential herptiles to disperse, the first cut to reduce the height to 30cm, then the second cut to 10-15cm.

- All materials to be stored off the ground (for example on pallets) to minimise the likelihood of herptiles accessing them for refugia.

- All spoil/waste materials to be removed from site at the end of each working day (or stored in a skip).

Badgers

6.2.28 No evidence of badger setts, or activity such as mammal runs, snuffle holes and latrines were found during the ecological appraisal of the site or the zone of influence. As the hedgerows on site supported fruit-bearing species, such as blackthorn and bramble, the loss of any linear features could result in the loss of valuable foraging habitat for badgers within the wider landscape.

6.2.29 Additionally, as badgers are a highly mobile species and may utilise the habitats on site on an intermittent basis, there is the potential that the proposed development could result in an Unlikely Negative (not significant) effect such as injury or death to individual badgers during the construction phase on site. The recommended mitigation measures will reduce the effects to neutral (Not significant) and primarily involve adhering to safe working practices and reasonable avoidance measures during the construction phase.

Mitigation Measures

6.2.30 No mitigation measures are required; however, a walkover survey should be conducted within the zone of influence (the site and 30 metres perimeter of boundary) prior to the commencement of works to identify if badgers have become active within the proposed development.

6.2.31 Appropriate precautions should be employed during construction works to prevent harm to this protected species:

- A walkover survey should be conducted within the zone of influence (the site and 30 metres perimeter of boundary) prior to the commencement of works to identify if badgers have become active within the proposed development.

- An ecological 'toolbox talk' should be provided to all site personnel prior to development works commencing. The 'toolbox talk' should include information pertaining to the ecology and protection of badgers, a brief description of field signs and who to contact should badgers be encountered during development works.

- Any excavations left overnight are to be covered at the end of each working day, or include a means of escape, such as wood planks. In addition, any temporarily exposed open pipe systems are to be capped in such a way as to prevent badgers gaining access.

- Do not store spoil heaps or brash piles on site. These should be removed to prevent the opportunistic use by badgers.

- Should badgers or any evidence of badgers be encountered during the walkover or construction phase, all works should cease, and the advice of an ecologist sought.

Hazel Dormouse

6.2.32 Hazel dormouse are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Suitable habitat was identified to the boundary hedgerows.

6.2.33 Dormouse surveys are currently ongoing and are due to be completed in September 2025, resulting in a probability score of 20 (minimum survey effort score = 20). Once the surveys are completed, then further information on the mitigation required will be detailed within an updated EcIA report.

Mammal Species of Principle Importance

6.2.34 Impacts and mitigation relating to common pipistrelle, soprano pipistrelle, Daubenton's bat and noctule have been detailed within Section 6.2.5 of this report.

6.2.35 The application site is likely to support foraging West European Hedgehog particularly along the woodland edge or the hedgerows defining the site boundaries as well as within the scrub and introduced shrubs located within the areas of grassland. The ground clearance works necessary to prepare the site could result in injury or death of this species of principle importance, presenting a Negative (Not significant) impact. The development proposals suggest that the hedgerows around the periphery of the site are to be retained following the

development reducing the likelihood of a significant effect to this species, however further mitigation should be implemented to safeguard this species.

Mitigation Measures

6.2.36 Habitat considered suitable for supporting west European hedgehogs should be retained around the periphery of the site, and vegetative connectivity through the site should be maintained. If individuals are found during ground clearance works, works should cease until the individual has been moved. Once removed, the area should be searched, and works can recommence.

6.3 Residual effects of proposed development

6.3.1 It should be noted that bat activity and hazel dormouse surveys are ongoing, and as such, mitigation measures for these ecological receptors may be subject to change, depending on the findings of these surveys. Additionally, as the development will need to be subject to a Habitat Regulations Screening Assessment, to assess whether there will be 'likely significant effects' on Carmarthen Estuaries SAC, mitigation measures in relation to drainage may be subject to change, depending on this screening assessment.

6.4 Cumulative effects

6.4.1 The mitigation and impact avoidance measures proposed for each ecological receptor should be secured through planning condition or obligation. At the time of writing there are no further consented developments within the local area, so a cumulative effect is not predicted, and upon successful implementation of these measures the site will increase the value of the site in terms of local biodiversity.

7 Compensation, Enhancement and Monitoring

7.1 Compensation

7.1.1 Based on surveys undertaken to date, it should be noted that it cannot be determined whether the proposed development will result in significant residual or cumulative effects. Upon completion of further survey works in 2025 and a Habitats Regulations Screening Assessment, compensatory measures may therefore be required, to help reduce any potential significant residual or cumulative effects.

7.2 Enhancement

7.2.1 In light of the Planning Policy Wales (PPW) that seeks net biodiversity benefit within developments and stipulates that "planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions" (PPW 11), the following enhancements are suggested (All enhancements should be overseen by an appropriate experienced ecologist):

Habitats

7.2.2 The construction of a LEMP for the site will secure enhancements and appropriate landscape treatments to enhance biodiversity within areas of open space. Landscape treatments carried out on site is to be undertaken using locally abundant, native species which can tolerate a range of climatic conditions. Open space should be managed to benefit local biodiversity following an appropriate management plan and seek to compensate for loss of habitats on site. Loss of vegetative features should be compensated for by planting native scrub and hedgerows, the transplantation or reseeding of grassland and the planting of native trees within an appropriate landscape and enhancement zone identified within the site master plan. A Green Infrastructure Statement and LEMP should be compiled, and a long-term maintenance scheme should be secured through a Section 106 agreement.

Bats

7.2.3 Post construction landscape treatments should be sympathetic to bat species and seek to enhance woodland edge and open space for bat species. Mitigation should be secured within the above mentioned LEMP, particularly within the centre of the application site where removal of vegetative linear features are anticipated.

7.2.4 To provide additional roosting opportunities for common bat species and mammals of principle importance, oak Kent boxes should be installed on large, retained trees along commuting routes. Boxes should be integrated around the site, in clusters facing in a southerly, easterly or westerly direction, above 5 metres in height. The specific location of bat mitigation should be secured within the LEMP.

Birds

7.2.5 During the construction phase 1SP Schwegler Sparrow Terraces, 45mm Starling nest boxes and No. 17A Triple Cavity swift boxes should be integrated into the integrated onto north or north-easterly elevations of the new school buildings across the site (Appendix 6). The Bird boxes should be positioned at a height of between 4 and 5 metres with an unobstructed flight line to and from the boxes during the Autumn.

7.2.6 Five x 1B Schwegler bird boxes in the following sizes: 2 x 26mm Hole, 2 x 32mm Hole, 1 x Oval Hole should be positioned on suitable trees along the eastern boundaries, with entrance holes directed towards the north and east to avoid strong sunlight and driving rain. The Bird boxes should be positioned at a height of between 2 and 4 metres during the autumn.

7.2.7 The Green Infrastructure Statement and LEMP should secure the inclusion of soft landscape treatments in the form of native trees, hedgerows and shrubs, planted across the site to offset any loss of vegetation and to provide supplementary habitat for overwintering and breeding birds within the area.

Hazel Dormouse

7.2.8 Where sections of the eastern boundary hedgerow are to be removed, compensatory hedgerow planting must be incorporated within this section of the proposed development, to ensure that the site maintains connectivity within the wider landscape for this protected species. Hedgerow must be planted with a mix of native hedgerow species, such as hazel, hawthorn, blackthorn, field maple, elder, and must be maintained to prevent any gaps and to maintain a height and width at a minimum of 1.5m.

7.3 Monitoring

7.3.1 Post construction monitoring will be required, to monitor the uptake and condition of the bespoke maternity roost mitigation across the site, the design of which is currently being discussed and designed in collaboration with the architects for the proposed development.

7.3.2 Monitoring surveys are also recommended for any retained and created habitats across the site, as part of the Green Infrastructure Statement and LEMP. Monitoring surveys are also recommended for hazel dormouse, to ensure any compensatory hedgerow planting is not failing, and that the site maintains its connectivity to the wider landscape for this protected species.

7.3.3 If works do not commence within two years of the UK Habitat survey, and 1 year of the phase 2 surveys the baseline conditions may need to be reassessed.

8 Conclusions

8.1.1 The application site at Coleg Sir Gar, Pibwrlwyd Campus has been the subject of a series of habitat and protected species surveys undertaken following best practice guidelines. The site was found to support habitats ranging between 'site' and 'district' value at an ecological level (Table 6).

8.1.2 The UK Habitat survey and Phase 2 surveys confirmed that roosting bats, foraging and commuting bats, breeding birds, hazel dormouse, and MSPI such as hedgehogs had the potential to be negatively affected by the proposed development and as such mitigation measures have been created to safeguard the status of these protected and notable species, reducing the effect to neutral or a positive effect.

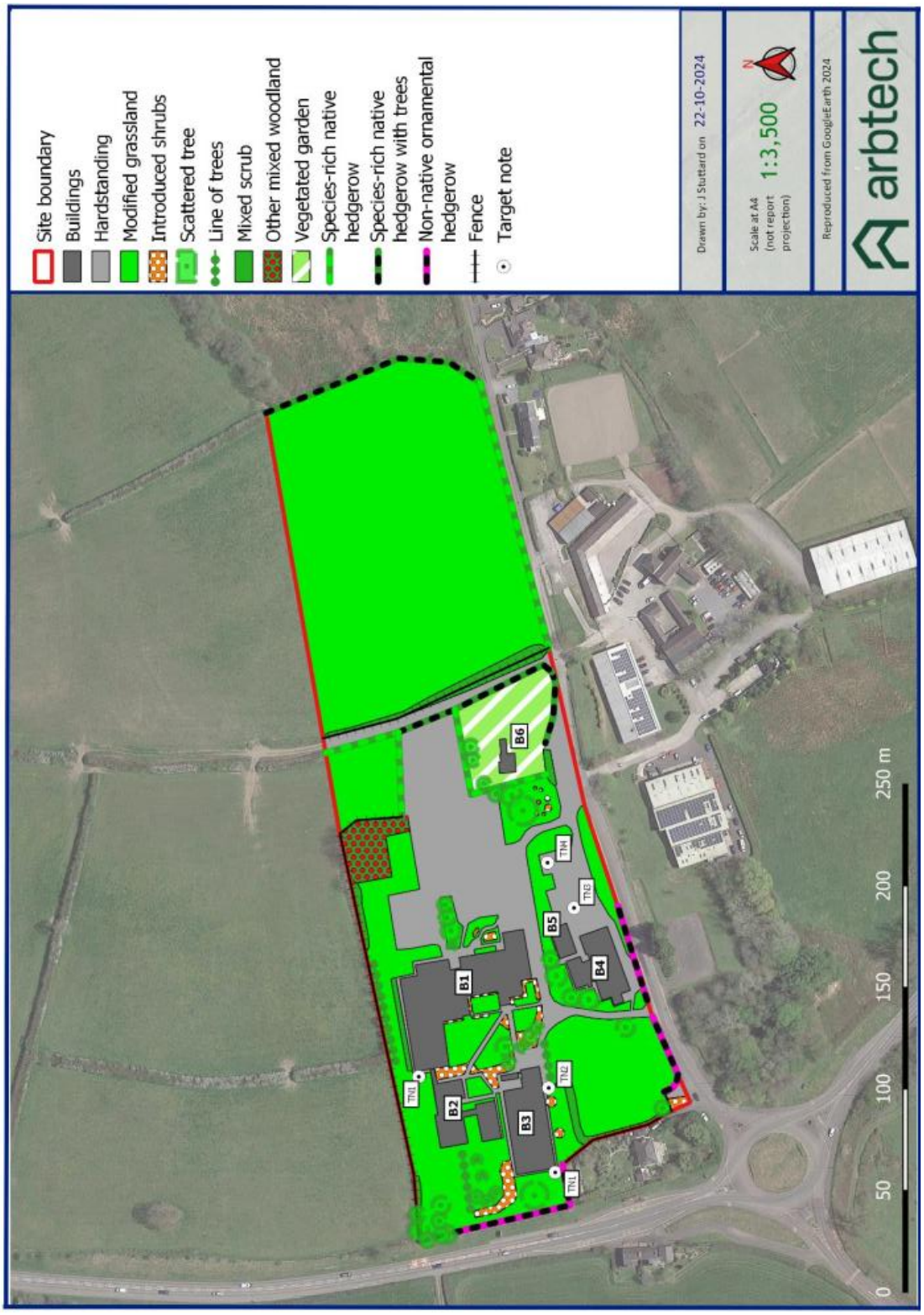
8.1.3 It should be noted that further surveys are ongoing for foraging and commuting bats and hazel dormouse. Therefore, following the completion of these surveys, mitigation measures in relation to these ecological receptors will be updated and detailed in an updated EcIA report for the proposed development.

8.1.4 The mitigation strategies outlined above should be secured through planning condition or obligation, to ensure that a negative effect for local wildlife populations and biodiversity is avoided and potentially enhanced through the landscape plan and prevent residual effects. The habitats recorded during the baseline surveys were locally frequent and of low ecological value. As a result, the loss of these habitats is not considered to be significant. The inclusion of native landscaping and open space onsite will improve the structural and botanical diversity on site enhancing the application site for a number of local species populations.

8.1.5 The implementation of enhancements listed within Section 7.2 would secure positive gains to local biodiversity when compared to the baseline ecological conditions of the application site.

8.1.6 The mitigation proposals detailed in Section 6 successfully address the potential impacts from the development to comply with both wildlife legislation and policy.

Appendix 1a – UK Habitat Classification Plan (Arbtech, 2024)



Appendix 1b – UK Habitat Classification Plan (Brindle & Green, 2025)

Appendix 2 - Target Notes and Species List

Table 13: Target Notes (Arbtech, 2024)

Target note number	Description	Photograph
1	Small brick-built plant room (Grid reference: SN 41079 18330)	
2	Electrical substation infrastructure (Grid reference: SN 41073 18266)	

Target note number	Description	Photograph
3	Temporary portacabin-style toilet block (Grid reference: SN 41163 18255)	
4	Shipping container (Grid reference: SN 41185 18263)	

Table 14: Target Notes (Brindle and Green, 2025)

Target note number	Description	Photograph
1	Himalayan balsam located within the woodland to the south of the existing car park (Grid reference: SN 41155 18168).	

Table 15: Plant Species List with DAFOR Scale

Scientific nomenclature follows Stace (2010) for vascular plant species and common names follow BSBI List of British & Irish Vascular Plants and Stoneworts.

Please note that this plant species list was generated as part of a Phase 1 Habitat survey and does not constitute a full botanical survey.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, LF = locally frequent

Common Name	Scientific Name	Estimated Abundance (DAFOR)
Alder	*Alnus glutinosa*	O
Ash	*Fraxinus excelsior*	O
Bamboo	*Bambusa sp.*	A
Beech	*Fagus sylvatica*	D
Birds foot trefoil	*Lotus corniculatus*	O
Bluebell	*Hyacinthoides non-scripta*	O
Bramble	*Rubus fruticosus agg.*	D

Common Name	Scientific Name	Estimated Abundance (DAFOR)
Broadleaved dock	*Rumex obtusifolius*	O
Broom	*Cytisus scoparius*	O
Buddleia	*Buddleja davidii*	O
Cedar	*Cedrus sp.*	O
Cherry	*Prunus sp.*	O
Cherry laurel	*Prunus laurocerasus*	D
Cleavers	*Galium aparine*	O
Cock's foot	*Dactylus glomerata*	A
Common daisy	*Bellis perennis*	F
Common dandelion	*Taraxacum officinale*	O
Common hogweed	*Heracleum spondylium*	O
Common hornbeam	*Carpinus betulus*	O
Common ivy	*Hedera helix*	F
Common knapweed	*Centaurea nigra*	O
Common nettle	*Urtica dioica*	O
Common ragwort	*Jacobaea vulgaris*	O
Common sedge	*Carex nigra*	F
Cotoneaster sp.	*Cotoneaster sp.*	O
Cow parsley	*Anthriscus sylvestris*	O
Cowslip	*Primula veris*	O
Creeping buttercup	*Ranunculus repens*	F
Creeping vetch	*Securigera varia*	O
Daffodil	*Narcissus sp.*	O
Dogwood	*Cornus sanguinea*	F
Field maple	*Acer campestre*	O
Fire thorn	*Pyracantha sp.*	O
Goat willow	*Salix caprea*	O
Gorse	*Ulex europaeus*	O
Greater plantain	*Plantago major*	O
Ground ivy	*Glechoma hederacea*	F
Guelder rose	*Viburnum opulus*	O
Harts tongue fern	*Asplenium scolopendrium*	A
Hawthorn	*Crataegus monogyna*	O
Himalayan balsam	*Impatiens glandulifera*	LF
Holly	*Ilex aquifolium*	O
Honeysuckle	*Lonicera periclymenum*	O
Lawsons cypress	*Chamaecyparis lawsoniana*	O
Lesser celandine	*Ficaria verna*	O
Lords-and-ladies	*Arum maculatum*	O
Meadow buttercup	*Ranunculus acris*	F
Meadow foxtail	*Alopecurus pratensis*	O
New Zealand flax	*Phormium sp.*	O
Old man's beard	*Clematis vitalba*	O
Pedunculate oak	*Quercus robur*	O
Perennial ryegrass	*Lolium perenne*	A
Ragged robin	*Silene flos-cuculi*	O
Red fescue	*Festuca rubra*	O
Ribwort plantain	*Plantago lanceolata*	F
Shield fern	*Polystichum sp.*	O
Silver birch	*Betula pendula*	O
Small-leaved lime	*Tilia cordata*	O

Common Name	Scientific Name	Estimated Abundance (DAFOR)
Snowberry	*Symphoricarpos albus*	O
Soft rush	*Juncus effusus*	O
Spindle	*Eunonumus europpaeus*	O
Spruce	*Picea sp.*	F
Sweet vernal grass	*Anthoxanthum odoratum*	F
Sycamore	*Acer pseudoplatanus*	O
Turkey oak	*Quercus cerris*	O
Viburnum sp.	*Viburnum sp.*	D
Violet sp.	*Viola sp.*	F
Western red cedar	*Thuka plicata*	O
Whitebeam	*Sorbus aria*	O
Wild strawberry	*Fragaria vesca*	O
Wood avens	*Geum urbanum*	A
Yarrow	*Achillea millefolium*	O
Yorkshire fog	*Holcus lanatus*	F

Appendix 3 – General References

Bell, S. McGillivary, D. (2006) Environmental Law. 6th ed. Oxford University Press.

Bright PW, Morris PA and Mitchell-Jones A (2006) Dormouse Conservation Handbook 2nd Edition. English Nature, Peterborough.

British Standards Institution (2013) BS 42020: Biodiversity – Code of practice for planning and development, British Standards Institution London

Byron, H (2000) Biodiversity and Environmental Impact Assessment: A Good Practice Guide for Road Schemes. The RSPB, WWF-UK, English Nature and the Wildlife Trusts, Sandy.

CIEEM (2017) Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines, (4th edition). Bat Conservation Trust, London. ISBN-978-1-7395126-0-6

Defra (2007) Hedgerow Survey Handbook; A standard procedure for local surveys in the UK. Defra, London.

Gilbert G, Gibbons DW, Evans J. (1998) Bird Monitoring Methods: Breeding Bird Survey (pages 389-393). RSPB.

Harris S, Cresswell P and Jefferies D (1989). Surveying Badgers.

Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 habitat survey (2003). JNCC.

Langton T, Beckett C and Foster J (2001) Great Crested Newt Conservation Handbook. Froglife, Halesworth.

Mitchell-Jones A.J. McLeish, A.P. (2004) Bat Workers Manual (3rd Edition). Joint Nature Conservation Committee.

Natural Resources Wales (2023). Badgers – A Guide for Developers. Available at: https://cdn.cyfoethnaturiol.cymru/696694/badgers-a-guide-for-developers.pdf?mode=pad&rnd=133216507090000000 [Accessed 26th September 2025].

Natural Resources Wales (NRW) (2025). Condition assessments for Welsh European marine sites (EMS). Available at: https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/condition-assessments-for-welsh-european-marine-sites-ems/?lang=en

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus). Herpetological Journal 10 (4), 143-155.

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1.* Chartered Institute of Ecology and Environmental Management, Ampfield.

Rodwell, J.S. Joint Nature Conservation Committee (JNCC). National Vegetation Classification: Users' handbook (2006). JNCC.

Rodwell, J.S. Joint Nature Conservation Committee (JNCC). National Vegetation Classification: Users' handbook (2006). JNCC.

Rose, F. (2006). The Wild Flower Key (Revised edition). Penguin books ltd, London

Stace, C. (2010). Field Flora of the British Isles. Cambridge University Press

Sutherland, W.J. (1996) Ecological Census Techniques. Cambridge University Press.

Treweek, J. (1999) Ecological Impact Assessment. Blackwell Science.

Williams, C. (2010) Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build. Riba Publishing.

Appendix 4 – Legislation, Policy and Guidance

Articles of British wildlife and countryside legislation, policy guidance and both Local and National Biodiversity Action Plans (BAPs) are referred to. The articles of legislation are:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Planning Policy Wales (PPW) (2023)
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC
- The Protection of Badgers Act 1992
- The Environment (Wales Act) 2016
- Hedgerow Regulations 1997

Appendix 5 – Legislation, Guidance and Methodology

Breeding Birds

All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition, for species listed on Schedule 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally or recklessly cause disturbance at, on or near an 'active' nest.

The bird breeding season is typically accepted to start in February/March and continue through until September/October, however breeding birds can be found all year round depending on the given species and climatic conditions.

A sites habitat composition, locality, association to designated sites as well as current usage and management are all considered in the decision as to whether further bird related surveys are required. In addition, surveys may be recommended based on incidental bird records collected during a Preliminary Ecological Appraisal, species identified within an ecological data search or target species listed within a local biodiversity action plan.

Bird surveys are carried out in accordance with:

- Gilbert G, Gibbons DW, Evans J. (1998) Bird Monitoring Methods. RSPB.

Bats

Roosting Bats

All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

Areas of concern; can be encountered in many types of structure and care should therefore be taken when undertaking maintenance or demolition of suitable structures and trees.

Site assessments of buildings, commuting and foraging habitat and trees are undertaken in accordance with:

- Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines, (4th edition). Bat Conservation Trust, London. ISBN-978-1-7395126-0-6 (Table 16, Table 17 and Table 18).

Preliminary Ecological Surveys look for evidence of bat presence such as feeding remains, bat droppings, roosting individuals and staining around potential access points. The suitability of site features are also assessed because absence of bat evidence, is not confirmation of a negative result.

Within trees, features searched for include; natural holes, woodpecker holes, cracks/splits in major limbs, loose bark, hollows, and dense cover of ivy over the tree. If evidence is found, or a building supports features conducive to supporting roosting bats then further presence / absence bat surveys and/or roost characterisation surveys will be recommended.

Foraging and Commuting bats

Habitat features on site are assessed for their suitability to support foraging and commuting bat populations. This assessment is independent from the suitability of the site to support roosting bats, and provides information on the likeliness of bat foraging activity within the local environment, and the dependence of individuals on these features for commuting to alternative roosting sites, foraging and migration.

Table 16: Guideline for assessing the suitability of a structure to support roosting habitat amended from Collins, J (2023)

Category	Description of Roosting Habitat	Number of additional presence / absence surveys required
None	No habitat features on site likely to be used by roosting bats at any time of year (complete absence of potential roosting features).	None
Negligible Suitability	Suitable cavities may exist, but these are less than ideal. Uncertainty remains as bats can use these features on occasion.	None
Low Suitability	A structure with one or more potential roost sites that could be used by individual bats opportunistically. The feature and surrounding habitat do not provide enough shelter, conditions* space for larger roost types such as a maternity or hibernation roost.	One survey between May and August

Category	Description of Roosting Habitat	Number of additional presence / absence surveys required
Moderate Suitability	A structure considered to have one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions* and surrounding habitat but are unlikely to support a roost of high conservation status (With regard to roost type only – assessments are made irrespective of species conservation status, which is established after presence is confirmed).	Two surveys between May and September (with at least one survey undertaken between May and August). Surveys should be spaced at least 3 weeks apart.
High Suitability	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions* and surrounding habitat.	Three surveys between May and September (with at least two surveys undertaken between May and August). Surveys should be spaced at least 3 weeks apart.
Confirmed	This category is where positive evidence of bats has been recorded. For example, bats are found; bat droppings may be present at a suitable location for roosting bats; existing bat records may be associated with the structure.	

* In this context conditions refers to the level of disturbance, light, height above ground, temperature, and humidity etc

Table 17: Guideline for assessing the suitability of a tree to support roosting habitat amended from Collins, J (2023)

INITIAL STAGE (Site scoping/PEA/PRA)		
Category	**Description**	**Survey effort to establish the presence/absence of bats**
NONE	Either no PRFS in the tree or unlikely to be any	None
FAR	Further assessment required to establish if PRFs are present in the tree	Ground Level Tree Assessment (GLTA) to further assess suitability
PRF	A tree with at least one PRF present	Ground Level Tree Assessment (GLTA) to further assess suitability
DETAILED STAGE (PEA/PRA/GLTA)		
PRF - I	PRF only suitable for individual bats or small numbers of bats due to size or lack of suitable surrounding habitats	None – precautionary method of works for removal and provision of roosting compensation

INITIAL STAGE (Site scoping/PEA/PRA)		
Category	**Description**	**Survey effort to establish the presence/absence of bats**
PRF - M	PRF suitable for multiple bats and may therefore be used by a maternity colony	Three Climbing inspection surveys for features to be undertaken May to September with at least 2 May to August. Surveys should be 3 weeks apart. If climbing and inspection not possible, 3 dusk emergence surveys with NVAs (Night Vision Aids) to be undertaken May to September with at least 2 May to August. Surveys should be 3 weeks apart. Should a maternity colony be confirmed less invasive methods, such as dusk emergence survey with NVAs should employed.
Known roost	Known roost present through local records, evidence, sightings, etc	Three Climbing inspection surveys for features to be undertaken May to September with at least 2 May to August. Surveys should be 3 weeks apart. If climbing and inspection not possible, 3 dusk emergence surveys with NVAs (Night Vision Aids) to be undertaken May to September with at least 2 May to August. Surveys should be 3 weeks apart. Should a maternity colony be confirmed less invasive methods, such as dusk emergence survey with NVAs should employed.

Table 18: Potential suitability of foraging and commuting habitat within an application boundary. Features should be assessed following this guide and professional judgement. Adapted from Collins, J (2023)

Category	**Description of commuting and foraging habitat**	**Survey effort to establish the value of commuting and foraging habitat****
Negligible Suitability	Negligible habitat features on site likely to be used by commuting or foraging bats.	None

Category	Description of commuting and foraging habitat	Survey effort to establish the value of commuting and foraging habitat**
Low Suitability	Habitat which could be used by low numbers of commuting bats such as an isolated gappy hedgerow, or an unvegetated stream unconnected to suitable habitat in the wider environment. Suitable, yet isolated habitat that could be used by foraging bats such as individual trees, or a patch of scrub.	Nighttime bat walk (NBW) survey: One survey visit per active season (Spring – April/May, Summer (June/July/August) – autumn – September/October). AND Static automated surveys: Data to be collected over a five-night period, per season. (Spring – April/May, Summer (June/July/August) – autumn – September/October).
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats, notably tree lines, hedgerows or linked back gardens. Habitat that is connected to the wider landscape which could be used by bats for foraging such as trees, open water, scrub or grassland.	Nighttime bat walk (NBW) survey: One survey visit per active season (Spring – April/May, Summer (June/July/August) – autumn – September/October). AND Static automated surveys: Data to be collected over a five-night period, per month (April to October)
High Suitability	Continuous, High-quality habitat that is well connected to the wider landscape which is considered to be highly conducive to commuting bats including river valleys, stream, hedgerows, and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses, and grazed parkland. Site is close to and connected to known roosts.	Nighttime bat walk (NBW) survey: One survey visit per active season (Spring – April/May, Summer (June/July/August) – autumn – September/October). AND Static automated surveys: Data to be collected over a five-night period, per month (April to October)

** This is only a guide for survey effort required, the complexity of the site and the proposed disturbance / loss of features will determine the extent of works required on a site by site basis

Badgers (*Meles meles*)

Badgers are protected under the Protection of Badgers Act 1992. It is illegal to wilfully kill, injure, disturb or take any badger, or attempt to do so and it is an offence to intentionally or recklessly damage, destroy, or obstruct access to any part of a badger sett.

Site assessments are undertaken in accordance with:

- Harris S, Cresswell P and Jefferies D (1989). Surveying Badgers.

During the PEA, the site and the 30-metre zone of Influence considered for this species are searched for evidence of badger activity. The surveyor will identify evidence of activity, or habitat suitability for this protected species. Even If no evidence of badger activity is found, if local conditions suggest that the habitat may be suitable for badger, further surveys will be recommended.

Amphibians

The great crested newt and natterjack toad are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond.

Great Crested Newt (*Triturus cristatus*)

The great crested newt, is fully protected under the Conservation of Habitat Regulations 2017 (as amended), making it an offence to intentionally or recklessly kill, injure, disturb or take great crested newts, intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection.

The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond. Sites should be considered suitable to support great crested newts if distribution and historical records suggest newts may be present, there is a pond within 500m of the development or the development site includes suitable terrestrial habitat refuges.

Great crested newt site assessments are undertaken in accordance with:

- English Nature. (2001) Great Crested Newt Mitigation Guidelines. English Nature, Peterborough. And
- Langton T, Beckett C and Foster J (2001) Great Crested Newt Conservation Handbook. Froglife, Halesworth.

Prior to a site visit, a desk study pond search is undertaken. When searching for ponds, Brindle & Green apply a total of 4 sources to establish their location. The following online sources are used:

OS MAPPING VIA EMAPSITE

GOOGLE EARTH PRO,

GOOGLE MAPS and

MAGIC MAPS

Each identified pond (Access permitting) is subjected to a Habitat Suitability Index (HSI) assessment providing a score for each pond. This survey should be undertaken during the summer period to be fully accurate, however assumptions can be made out of season to guide survey recommendations.

Reptiles

Two species of reptile, the sand lizard and smooth snake, and their habitats are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. All other native British reptiles are protected against intentional killing and injury.

British reptiles are found in exposed, undisturbed areas, such as areas without cultivation with differing areas of grassland sward length. Suitable areas include abandoned sand quarries, fallow farmland land, heathland, post-industrial land, railway corridors etc. If these types of suitable features are found then further reptile surveys are recommended.

- Edgar P, Foster J and Baker J (2010) Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.
- Gent T and Gibson S (2003) Herpetofauna Workers Manual. JNCC, Peterborough.

Hazel Dormouse (*Muscardinus avellanarius*)

Hazel dormice and their habitat are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). It is illegal to intentionally kill, injure or capture hazel dormice, damage or destroy a dormouse resting place or breeding site, deliberately or recklessly disturb a hazel dormouse while it's in a structure or place of shelter or protection, block access to structures or places of shelter or protection or possess, sell, control or transport live or dead hazel dormice, or parts of hazel dormice.

Site assessments were undertaken in accordance with:

- Bright PW, Morris PA and Mitchell-Jones A (2006) Dormouse Conservation Handbook 2nd Edition. English Nature, Peterborough.

Visual survey methods are carried out on each site visit with particular attention given to woodland, hedgerows and scrub.

Invasive non-native weeds

Plant species such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) are examples of invasive non-native weeds classified

under Part II of Schedule 9 of the Wildlife and Countryside act 1981. Any person who causes these species to grow or spread in the wild by dumping or other means is guilty of an offence. The plant and the soil these species are found growing in are classified as waste material and should be treated as such.

A simple walk over survey of the site to determine if these species are present was carried out during the PEA. A full list of Schedule 9 species can be found at Plantlife.org

Ecological Enhancement

In March 2023 the Department for Communities and Local Government published the National Planning Policy Framework. This sets out planning policies on protection of biodiversity through the planning system. The document states - opportunities to incorporate biodiversity in and around developments should be encouraged.

For new buildings guidance such as in the following will be used:

- Williams, C. (2010) Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build. Riba Publishing.

Designated Sites

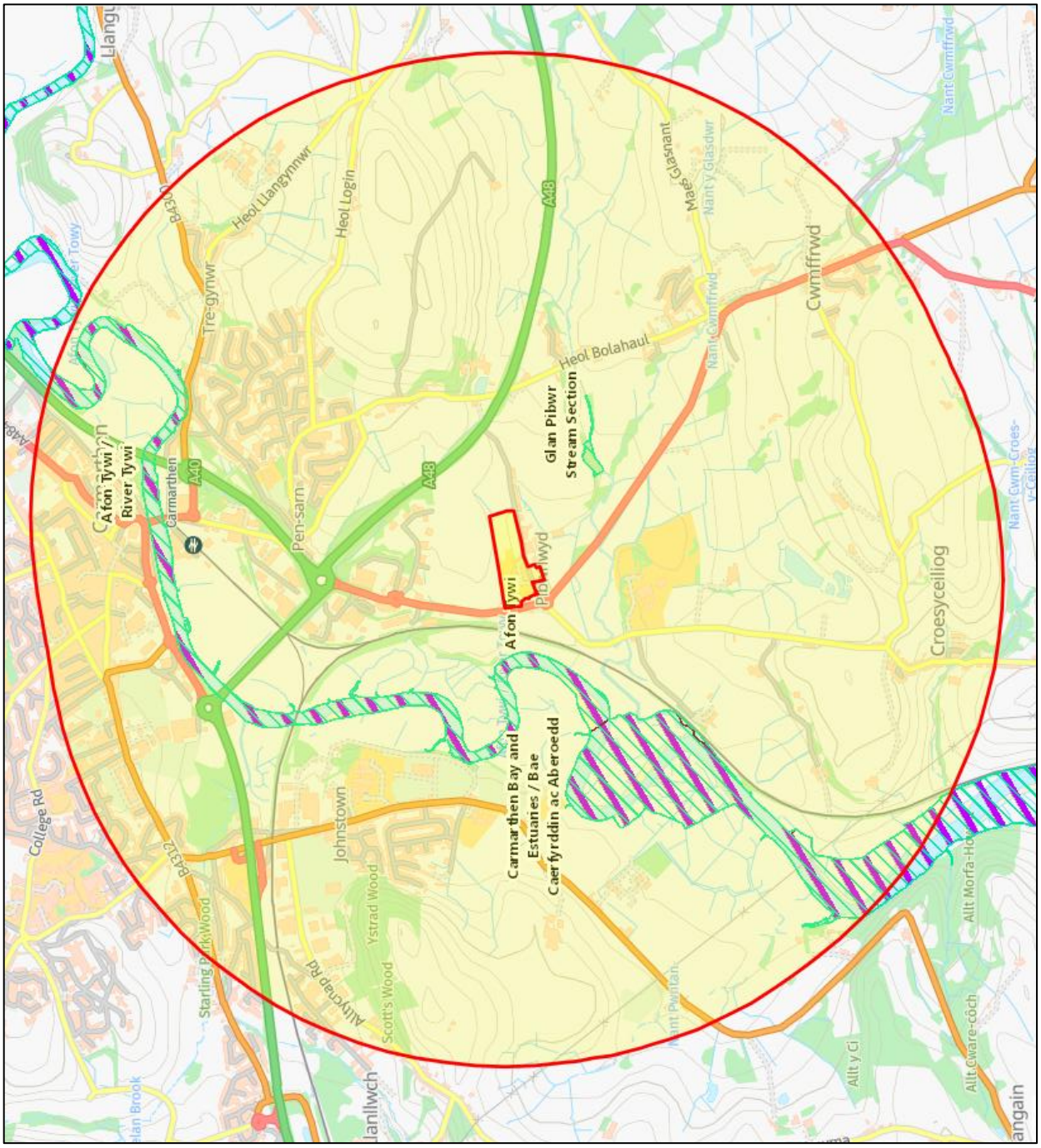
Designated areas are Sites of Special Scientific Interest (SSSI) while others have been designated as having European protection status. Local authorities can also designate areas for nature conservation and in doing so may impose local authority byelaws to support local nature conservation objectives.

European designated status includes Special Protection Areas (SPAs) that preserve areas for birds and Special Areas of Conservation (SACs) which provides protection for habitats and the species which these habitats support.

Information of Designated Protected Areas is received through Ecological Data Searches and Magic Map searches.

Appendix 6 – Proposed Plans

Appendix 7 – MAGIC data



Designations

Land-Based Designations

Statutory

Sites of Special Scientific Interest (Wales)

Sites of Special Scientific Interest (Wales)

Special Areas of Conservation (Wales)

Special Areas of Conservation (Wales)

Appendix 8 – Protected Species Surveys

Appendix 8a – Ground Level Tree Assessment (GLTA)

Table 19: Summary of bat roost suitability and evidence found within each of the trees on site

PRF-M	PRF-I	Negligible

Tree Number	Description	Bat Evidence / potential Roosting Features (PRFs)	Photograph	Roost Suitability
T9	Mature Patagonian oak (*Nothofagus obliqua*) tree located to the southwest of the existing college campus.	– Single knot hole on main trunk, facing southwest. Approximately 2.5m high.		PRF-M

T45	Mature beech tree located	– Hole in main trunk facing south. Approximately 3m high. – Tear outs on limb facing south-west to west. Approximately 3.5m high.		PRF-M

Tree Number	Description	Bat Evidence / potential Roosting Features (PRFs)	Photograph	Roost Suitability
				

Tree Number	Description	Bat Evidence / potential Roosting Features (PRFs)	Photograph	Roost Suitability
T50	Semi-mature whitebeam tree located centrally within the existing college campus.	– Small tear out on limb facing north-west. Approximately 2m high.		PRF-I

Tree Number	Description	Bat Evidence / potential Roosting Features (PRFs)	Photograph	Roost Suitability
T64	Mature pedunculate oak located to the east of the existing college campus.	– Small cavity at top of tree on main trunk facing southeast. Approximately 3.5m high.		PRF-M

Appendix 8b – Bat Emergence Surveys

Building 1 and 2

Survey Date / Time	Sunset/ Sunrise time	Start time	End time	Start Temp °C	End Temp °C	Cloud Cover	Wind Speed	Start Humidity %	End Humidity %
19/05/2025	21:10	20:55	22:40	15	11	5	BF1	69%	76%
30/06/2025	21:40	21:25	23:10	20	18	8	BF1	81%	83%
28/07/2025	21:12	20:58	22:42	17	15	1	BF1	74%	84%

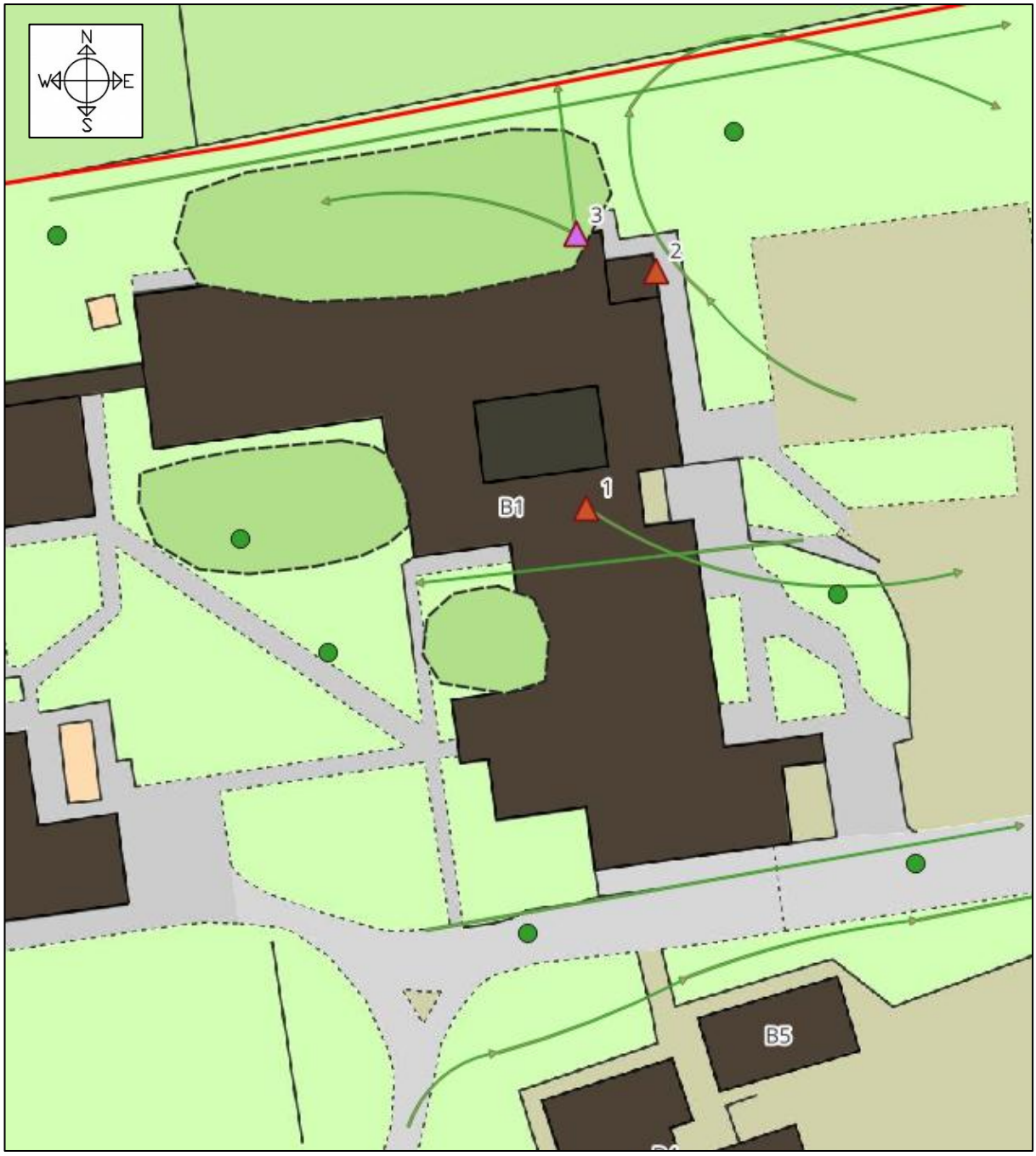


Figure 18: Summary of Bat Activity during the survey undertaken 19/05/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	
Day Roost		Maternity Roost			

Figure 19: Summary of Bat Activity during the survey undertaken 30/05/2025.

Key

Surveyor and NVA Location

Commuting Lines

Notable Foraging areas

Day Roost

Maternity Roost

Figure 20: Summary of Bat Activity during the survey undertaken 28/07/2025.

Key					
	Surveyor and NVA Location		Commuting Lines		Notable Foraging areas
	Day Roost		Maternity Roost		

Figure 21: Summary of Bat Activity during the survey undertaken 19/05/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	
Day Roost		Maternity Roost		Day Roost	

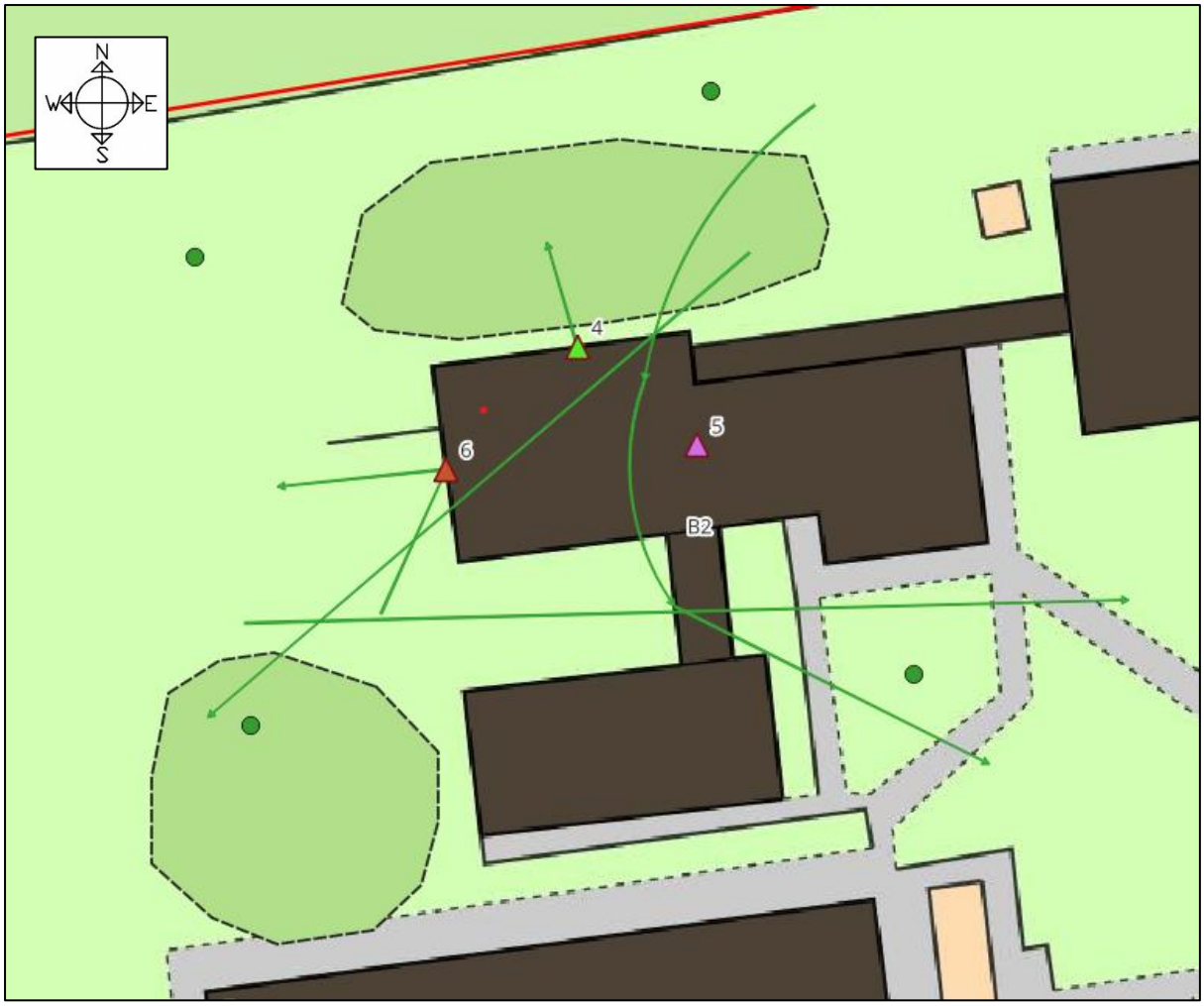


Figure 22: Summary of Bat Activity during the survey undertaken 30/06/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	
Day Roost		Maternity Roost		Day Roost	

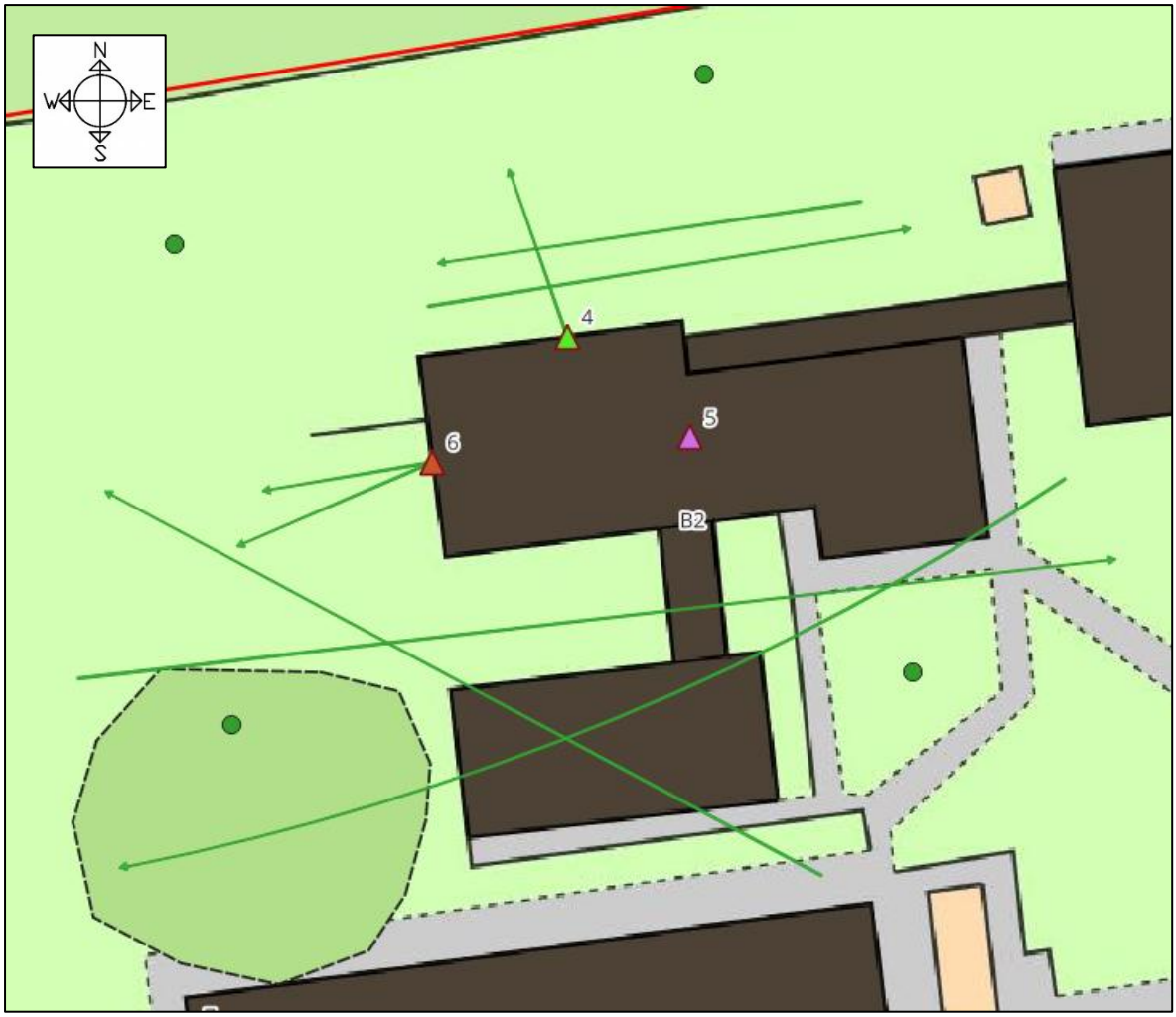


Figure 23: Summary of Bat Activity during the survey undertaken 28/07/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	
Day Roost		Maternity Roost		Day Roost	

Building 3 and 4

Survey Date / Time	Sunset/ Sunrise time	Start time	End time	Start Temp °C	End Temp °C	Cloud Cover	Wind Speed	Start Humidity %	End Humidity %
28/05/2025	21:22	21:07	23:22	16	14	8	BF2	73%	94%
18/06/2025	21:39	21:24	23:03	17	11	0	BF1	85%	90%
14/07/2025	21:30	21:15	23:00	15	14	7	BF2	69%	75%

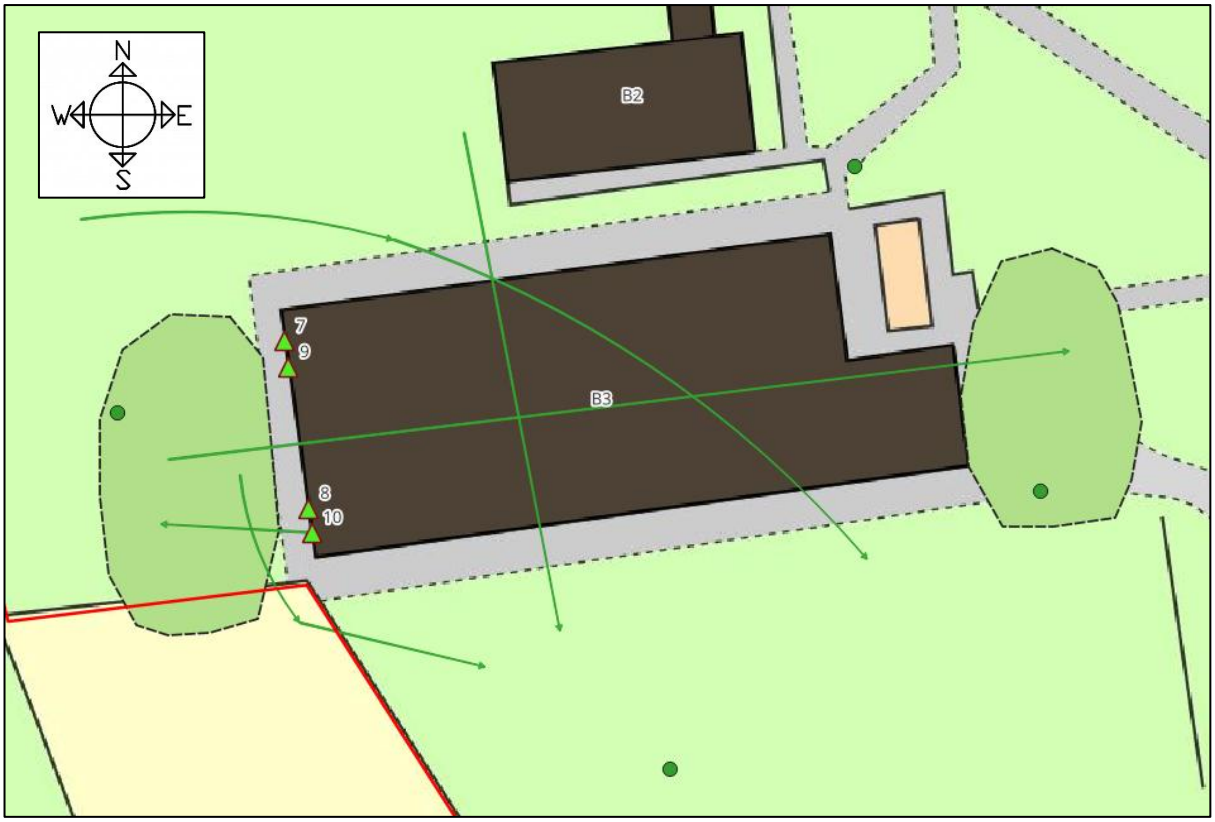
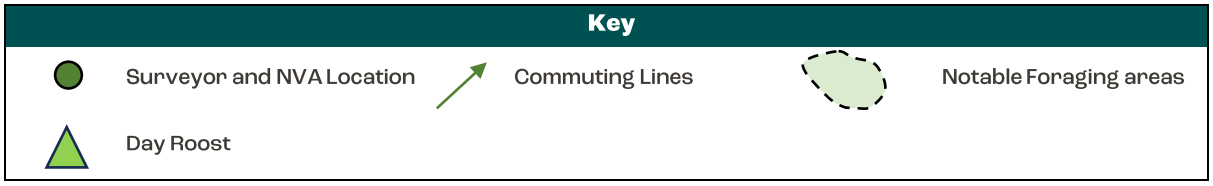


Figure 24: Summary of Bat Activity during the survey undertaken 28/05/2025.



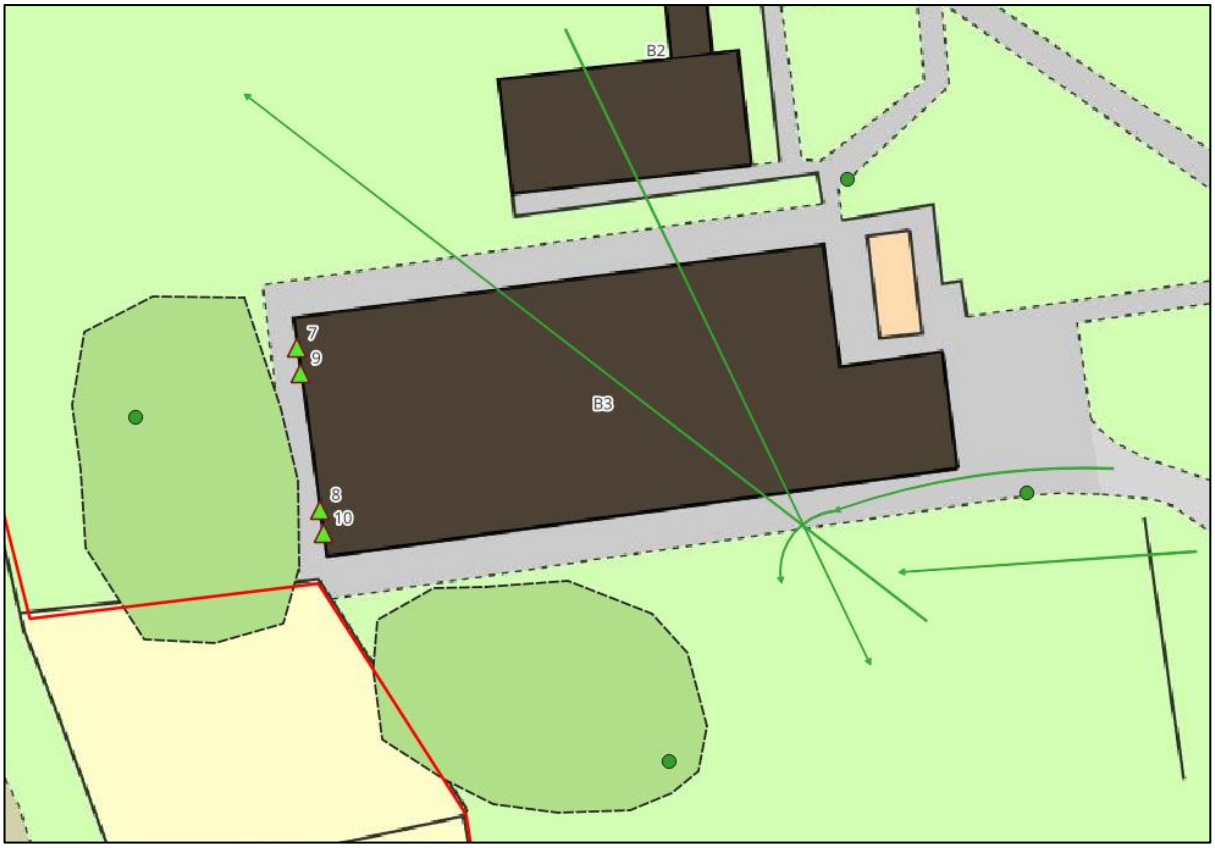
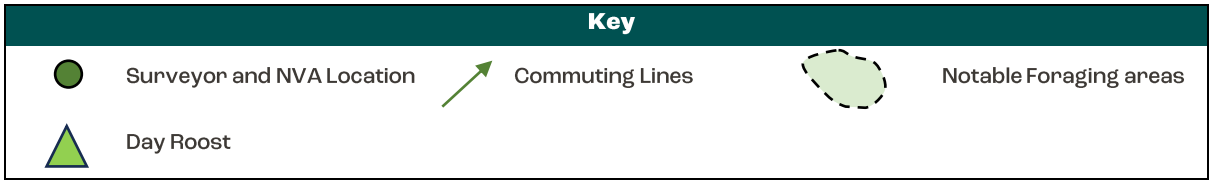


Figure 25: Summary of Bat Activity during the survey undertaken 18/06/2025.



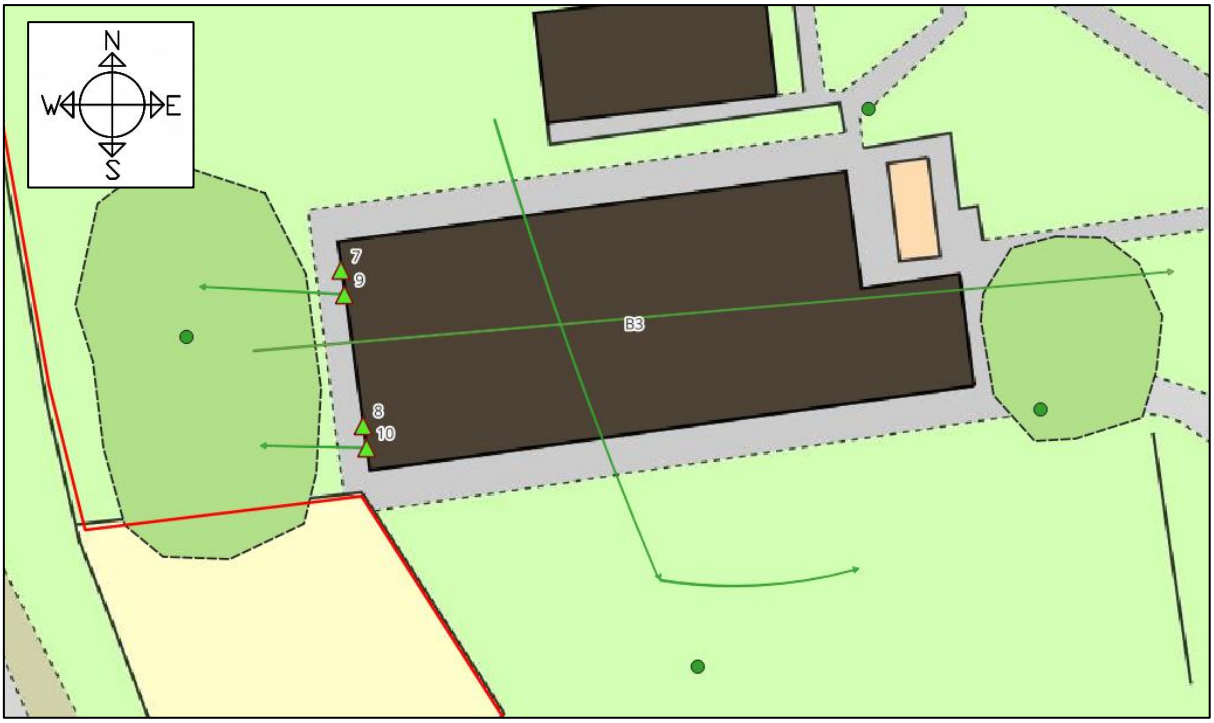


Figure 26: Summary of Bat Activity during the survey undertaken 18/06/2025.

Key					
	Surveyor and NVA Location		Commuting Lines		Notable Foraging areas
	Day Roost				

Figure 27: Summary of Bat Activity during the survey undertaken 19/05/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	

Figure 28: Summary of Bat Activity during the survey undertaken 30/06/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	

Figure 29: Summary of Bat Activity during the survey undertaken 14/07/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	

Building 5

Survey Date / Time	Sunset/ Sunrise time	Start time	End time	Start Temp °C	End Temp °C	Cloud Cover	Wind Speed	Start Humidity %	End Humidity %
17/06/2025	21:39	21:24	23:09	18	15	8	BF1	64%	80%
08/07/2025	21:36	21:21	22:56	16	15	`8	BF2	76%	89%

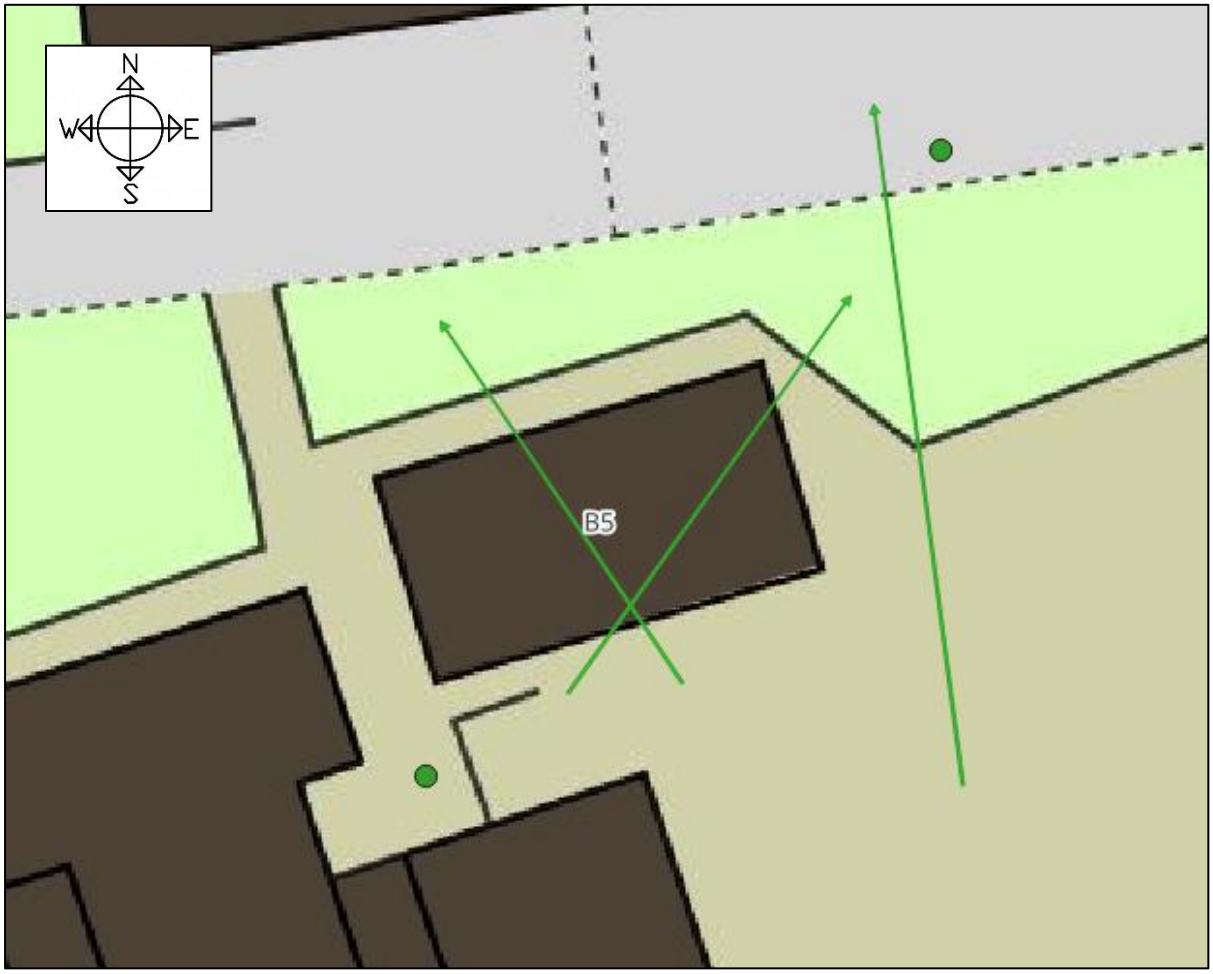


Figure 30: Summary of Bat Activity during the survey undertaken 17/06/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	

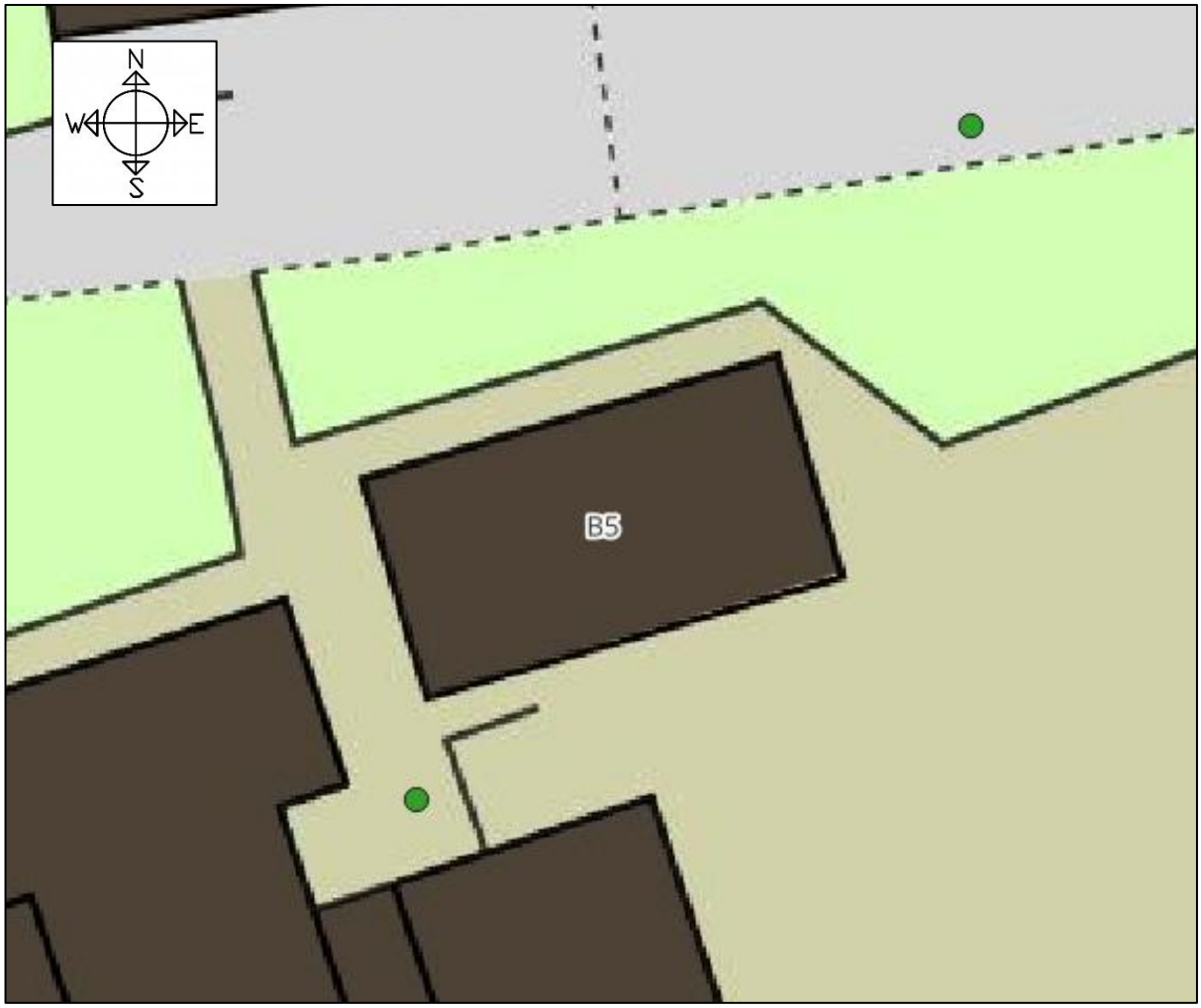


Figure 31: Summary of Bat Activity during the survey undertaken 17/06/2025. All bat passes were recorded as HNS.

Key			
Surveyor and NVA Location	Commuting Lines		Notable Foraging areas

Building 6

Survey Date / Time	Sunset/ Sunrise time	Start time	End time	Start Temp °C	End Temp °C	Cloud Cover	Wind Speed	Start Humidity %	End Humidity %
17/06/2025	21:39	21:24	23:09	18	15	8	BF1	64%	80%
08/07/2025	21:36	21:21	22:56	16	15	`8	BF2	76%	89%
12/08/2025	20:46	20:31	22:16	21	20	7	BF1	69%	69%

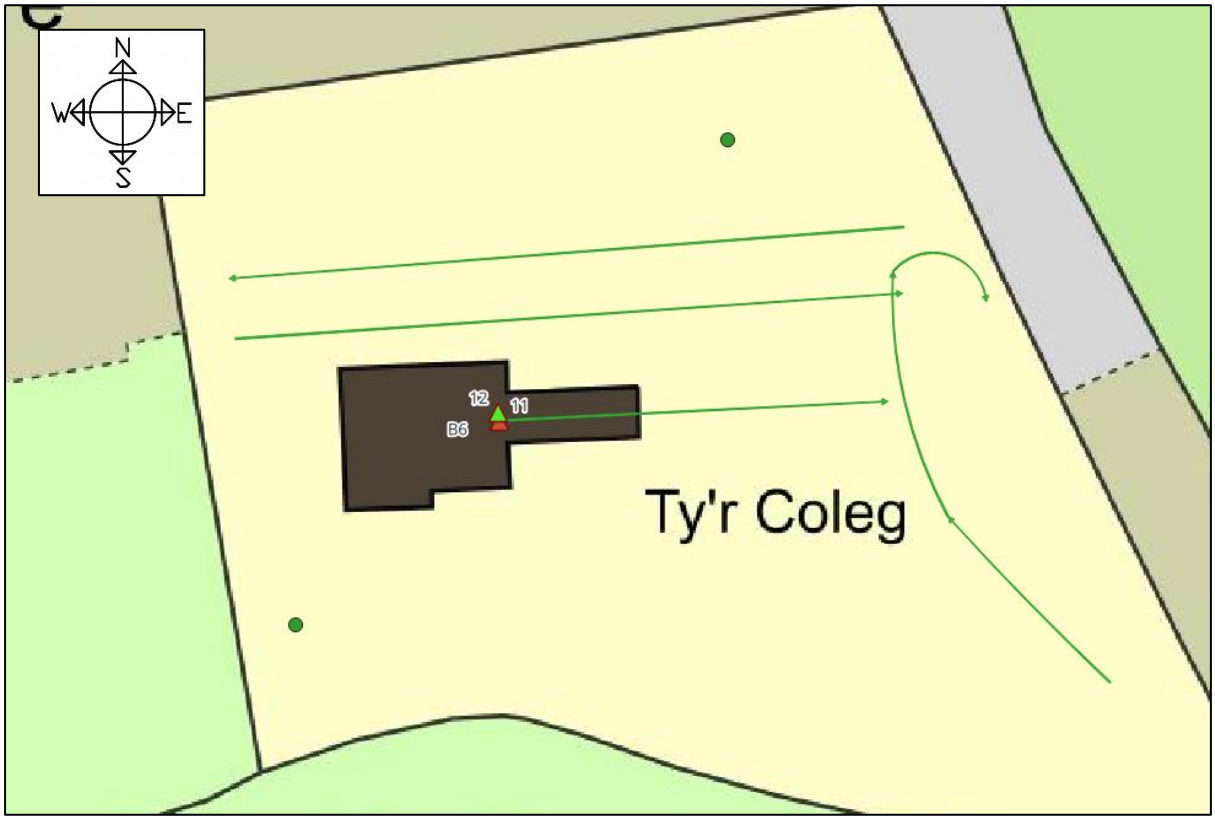


Figure 32: Summary of Bat Activity during the survey undertaken 17/06/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	

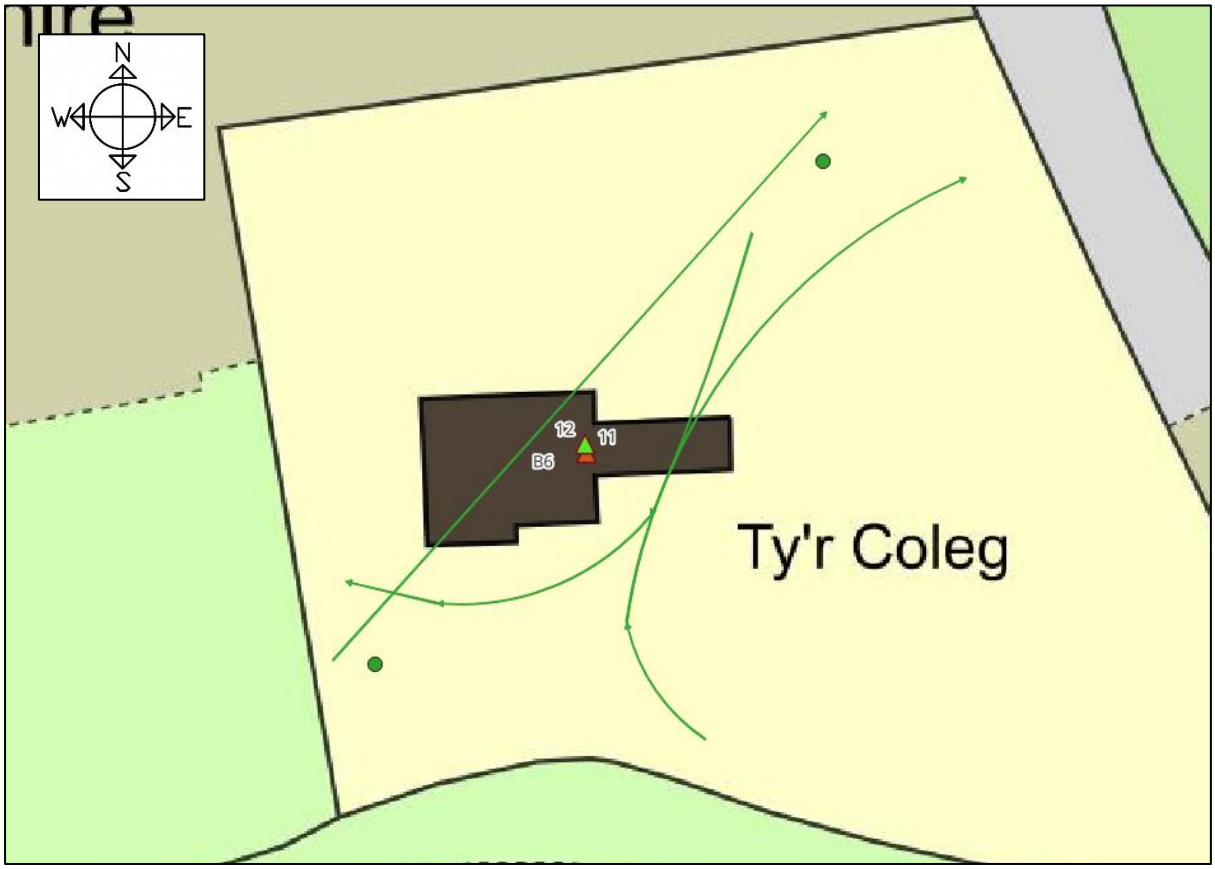
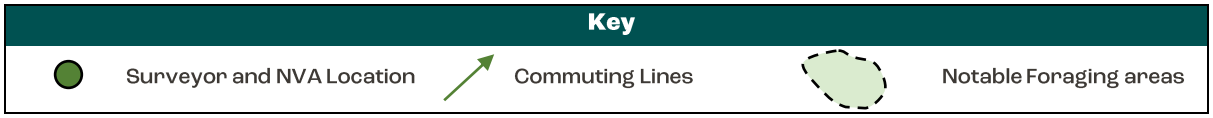


Figure 33: Summary of Bat Activity during the survey undertaken 08/07/2025.



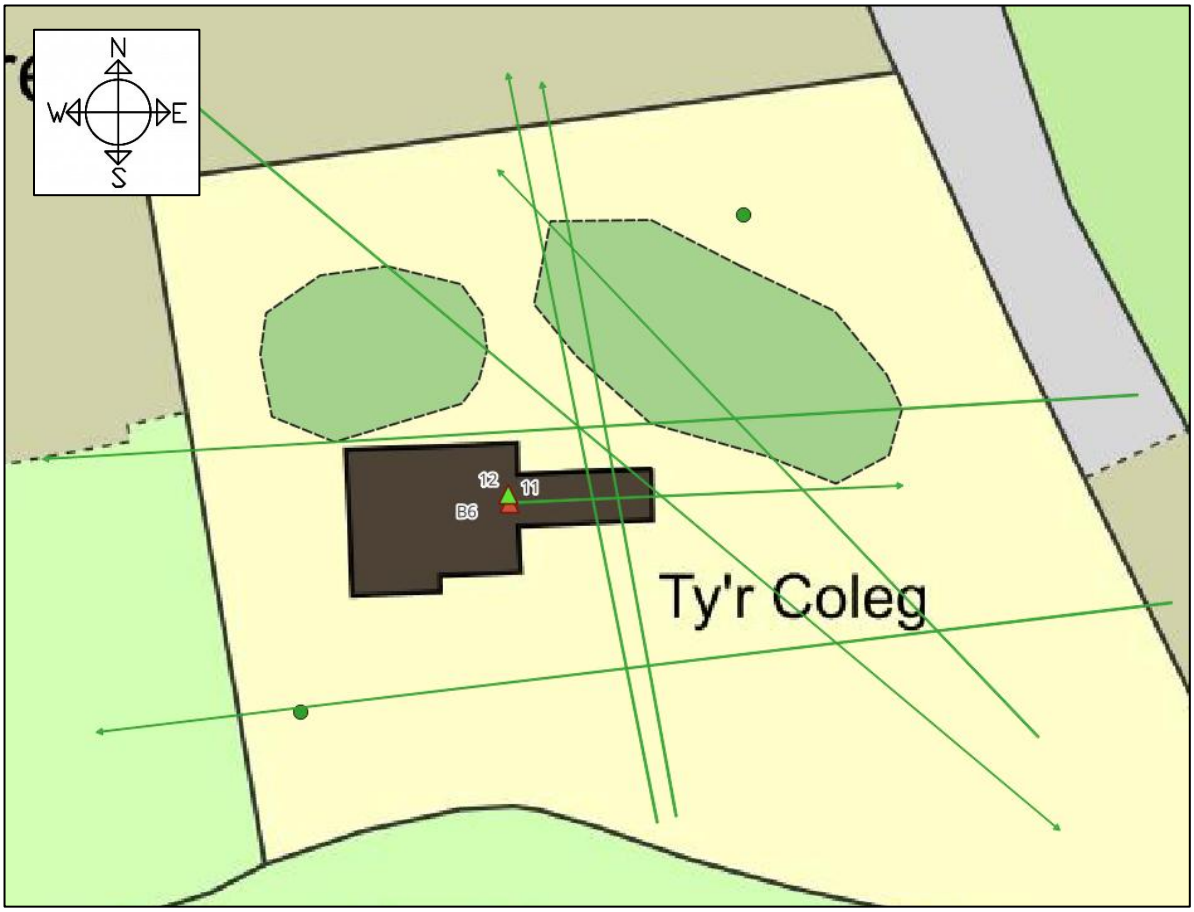


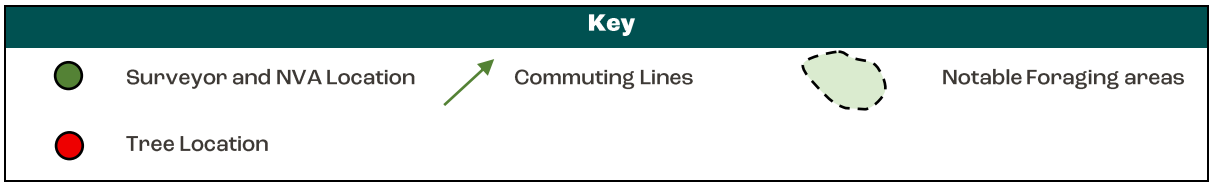
Figure 34: Summary of Bat Activity during the survey undertaken 08/07/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	

Trees T9, T45, and T64

Survey Date / Time	Sunset/ Sunrise time	Start time	End time	Start Temp °C	End Temp °C	Cloud Cover	Wind Speed	Start Humidity %	End Humidity %
30/06/2025	21:40	21:25	23:10	20	18	8	BF1	81%	83%
22/07/2025	21:06	21:21	22:51	17	16	7	BF1	77%	83%
12/08/2025	20:46	20:31	22:16	21	20	7	BF1	69%	69%

Figure 35: Summary of Bat Activity during the survey undertaken 30/06/2025.



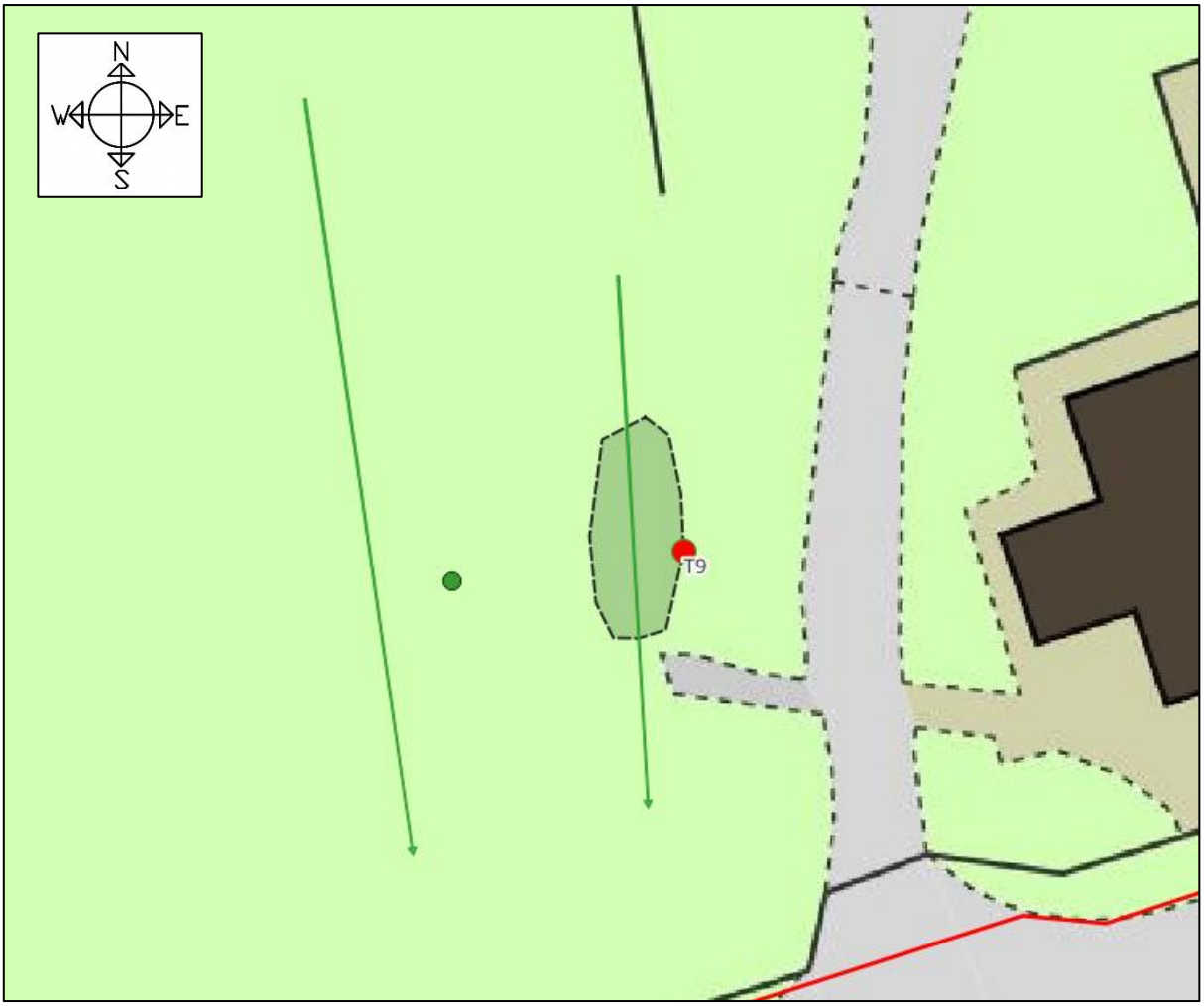


Figure 36: Summary of Bat Activity during the survey undertaken 22/07/2025.

Key

Surveyor and NVA Location

Commuting Lines

Notable Foraging areas

Tree Location

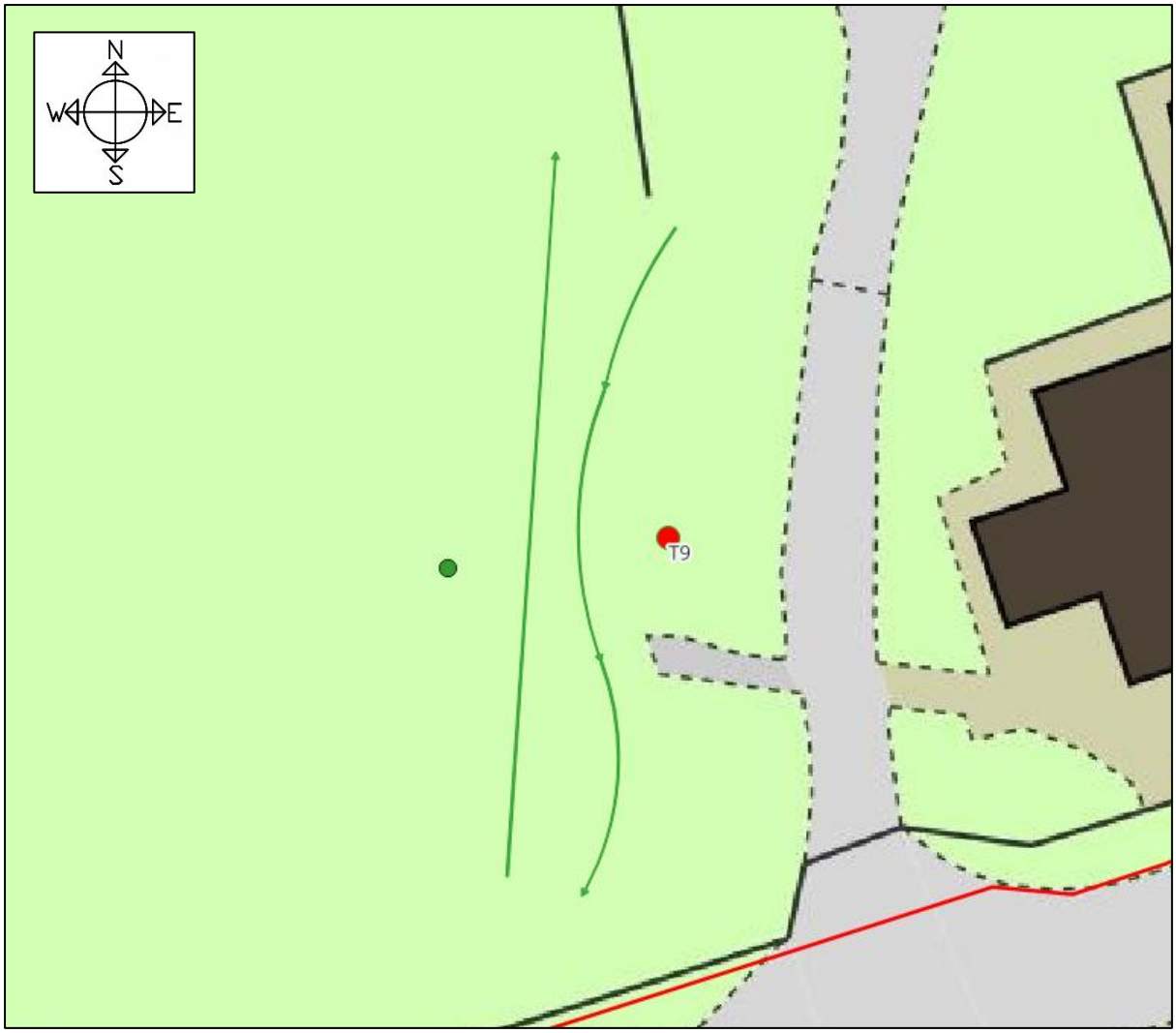


Figure 37: Summary of Bat Activity during the survey undertaken 12/08/2025.

Key					
	Surveyor and NVA Location		Commuting Lines		Notable Foraging areas
	Tree Location				

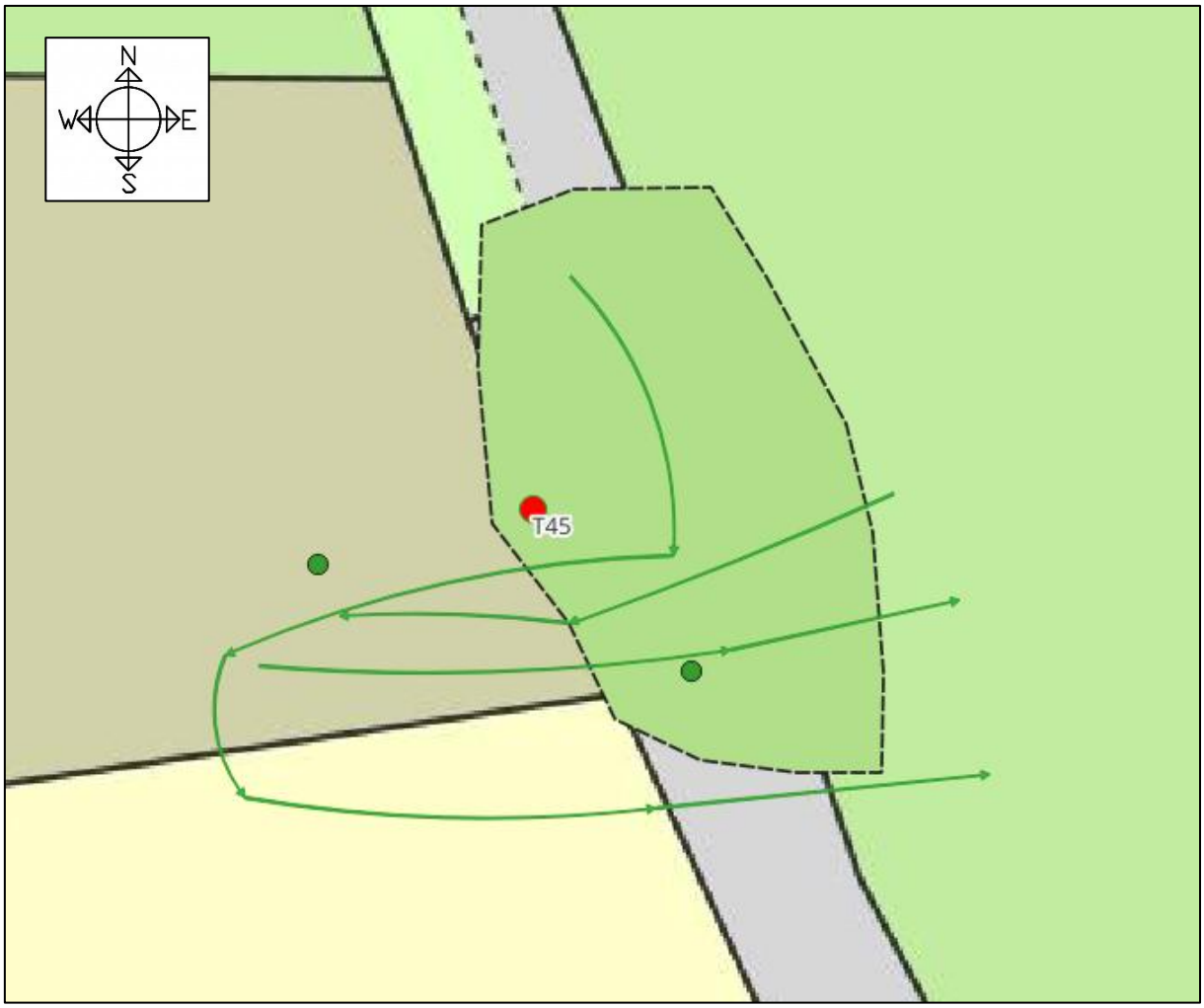


Figure 38: Summary of Bat Activity during the survey undertaken 30/06/2025.

Key					
	Surveyor and NVA Location		Commuting Lines		Notable Foraging areas
	Tree Location				

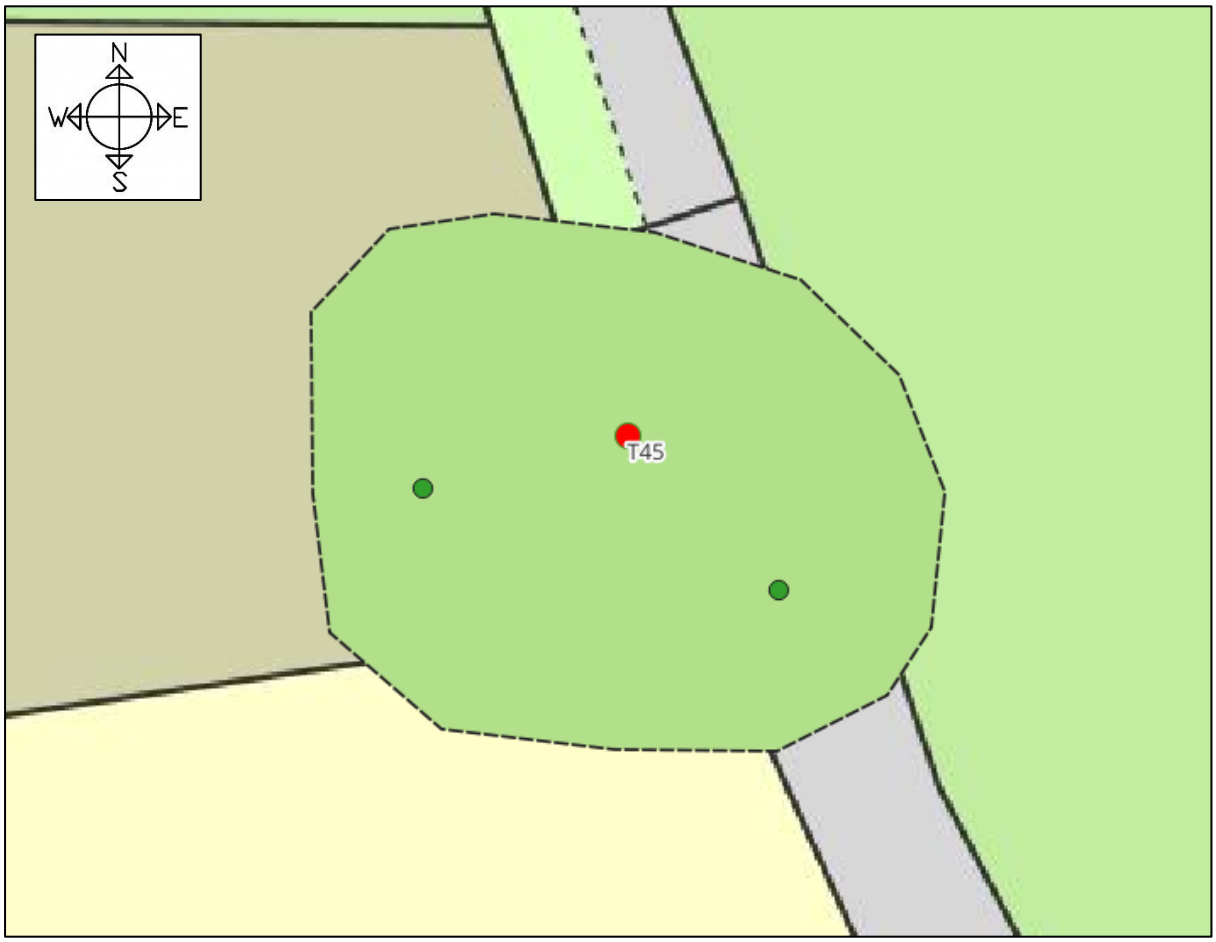


Figure 39: Summary of Bat Activity during the survey undertaken 22/07/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	
Tree Location					

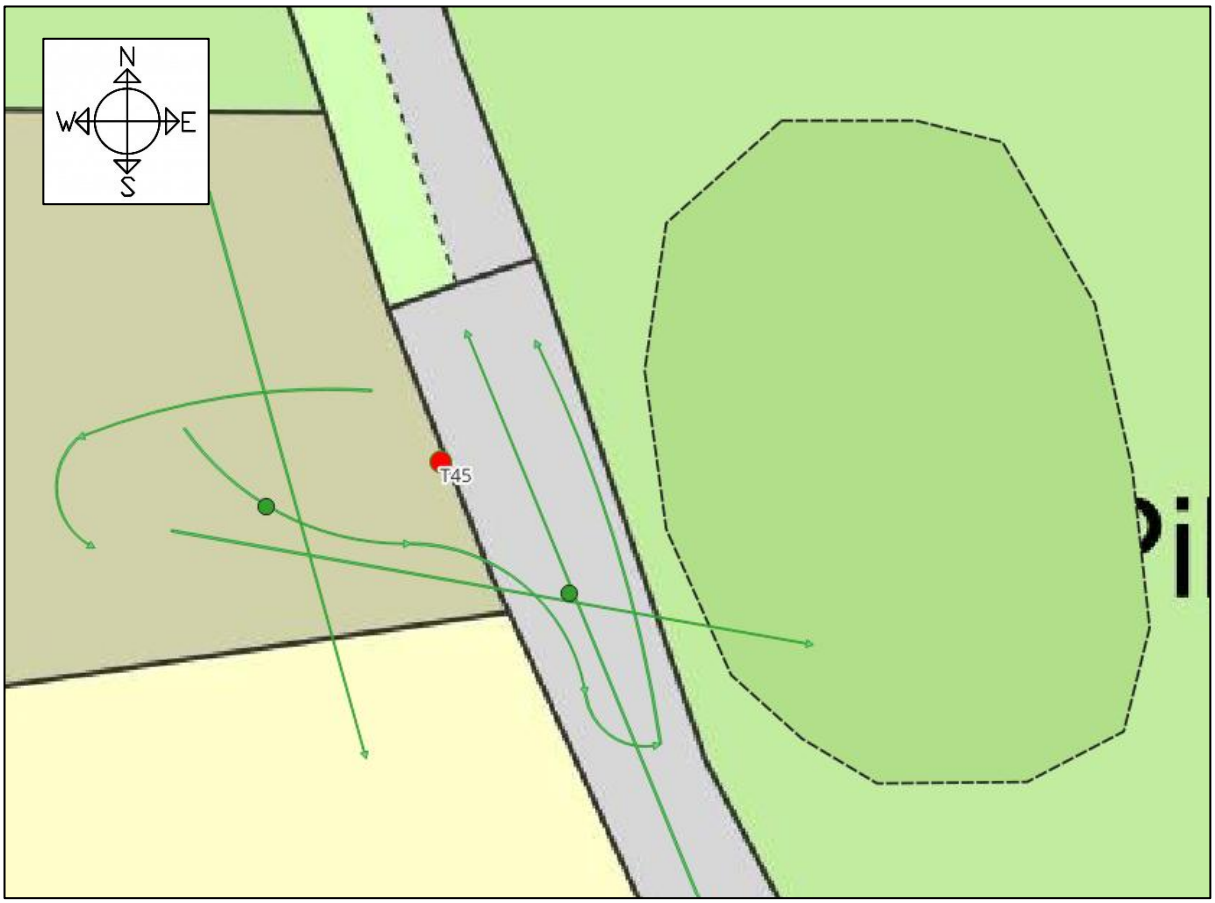
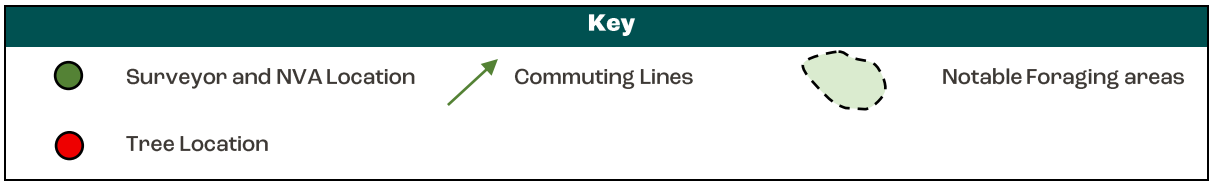


Figure 40: Summary of Bat Activity during the survey undertaken 12/08/2025.



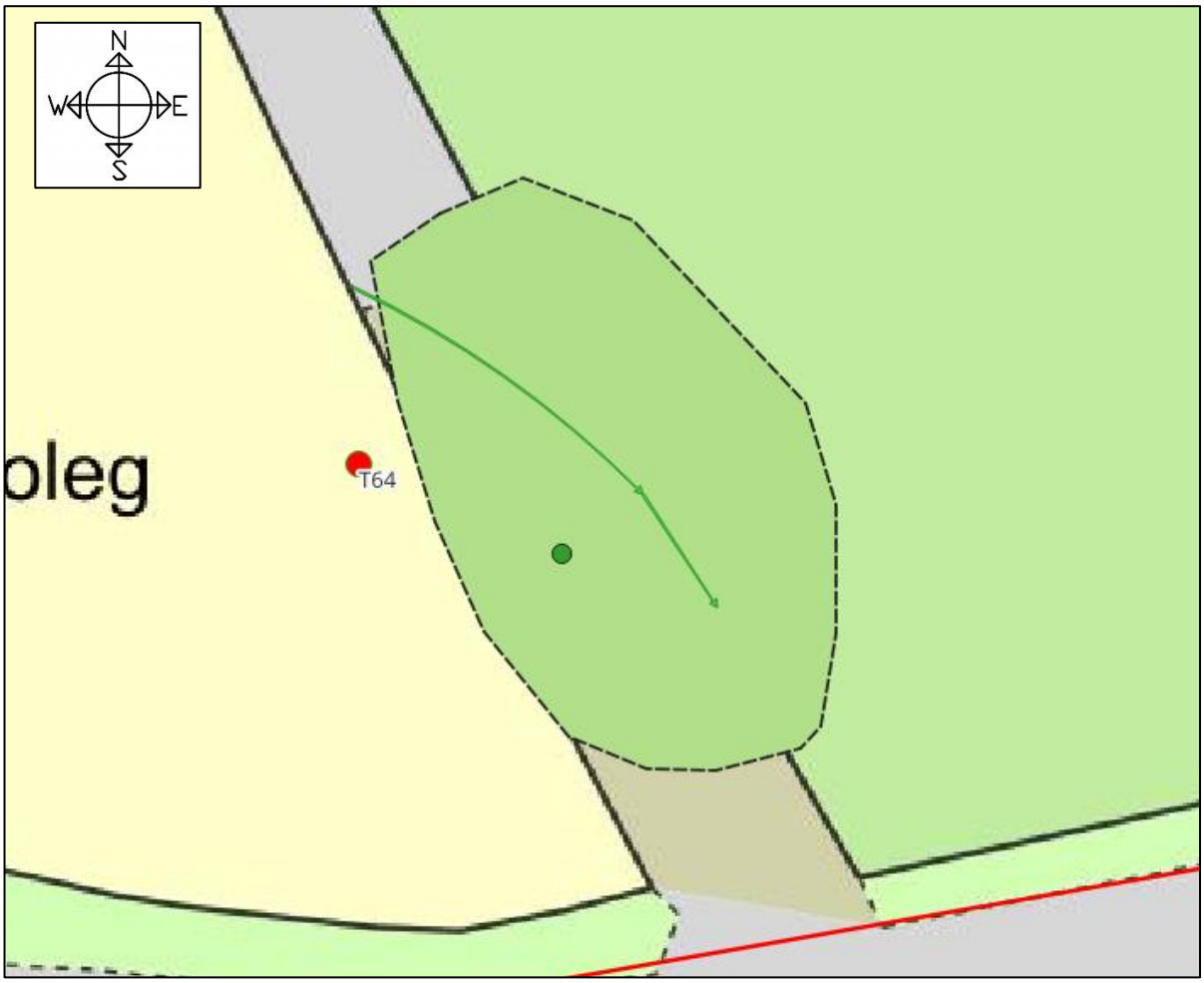
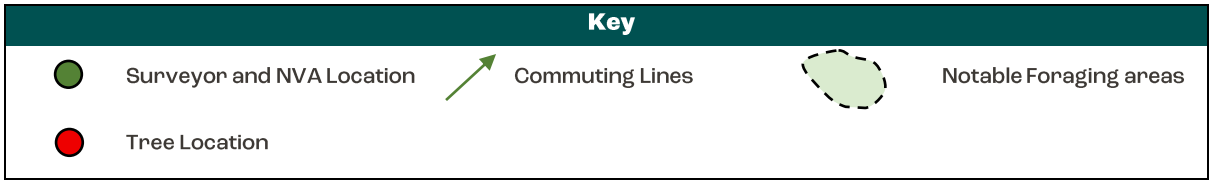


Figure 41: Summary of Bat Activity during the survey undertaken 30/06/2025.



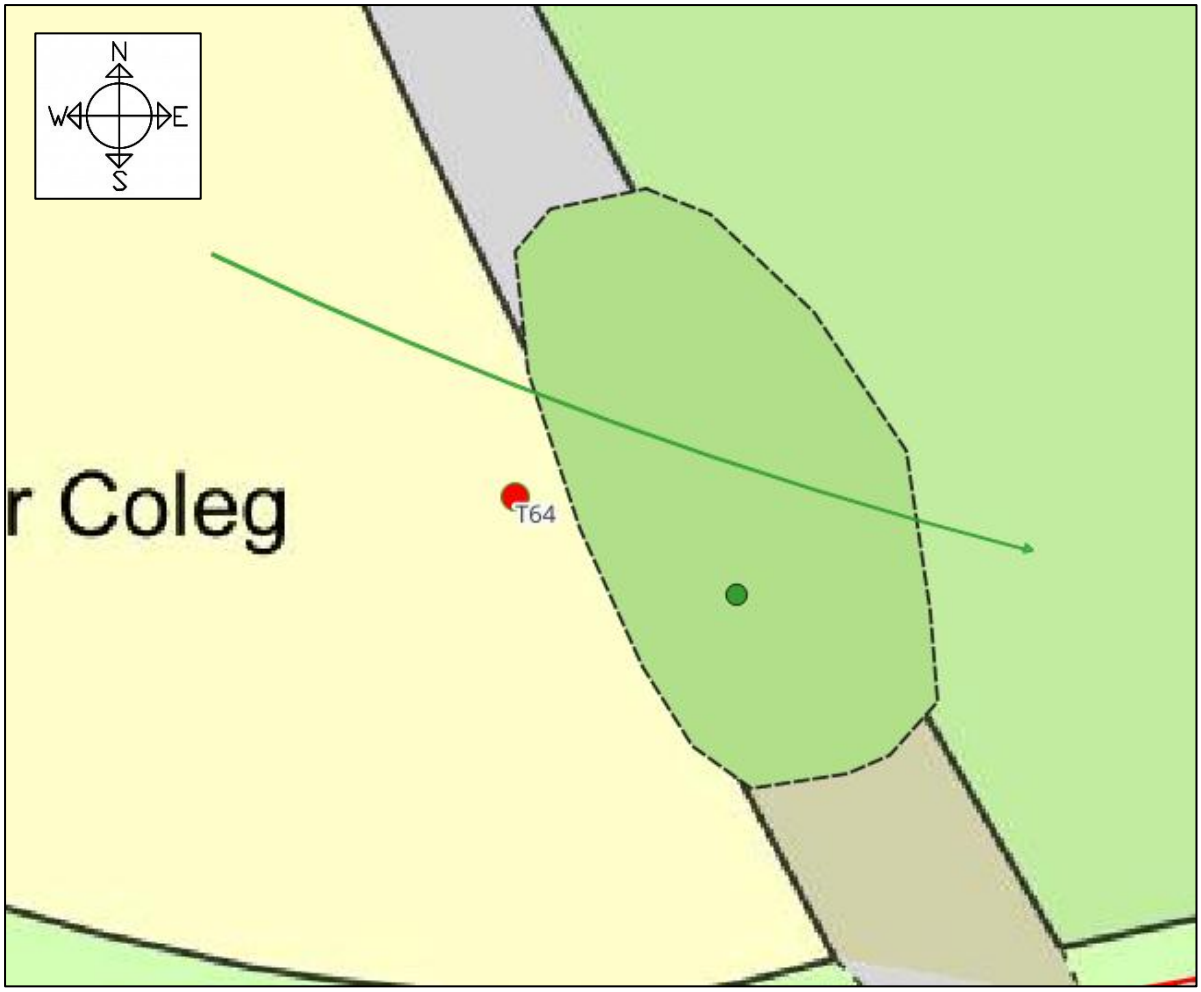


Figure 42: Summary of Bat Activity during the survey undertaken 22/07/2025.

Key					
Surveyor and NVA Location		Commuting Lines		Notable Foraging areas	
Tree Location					

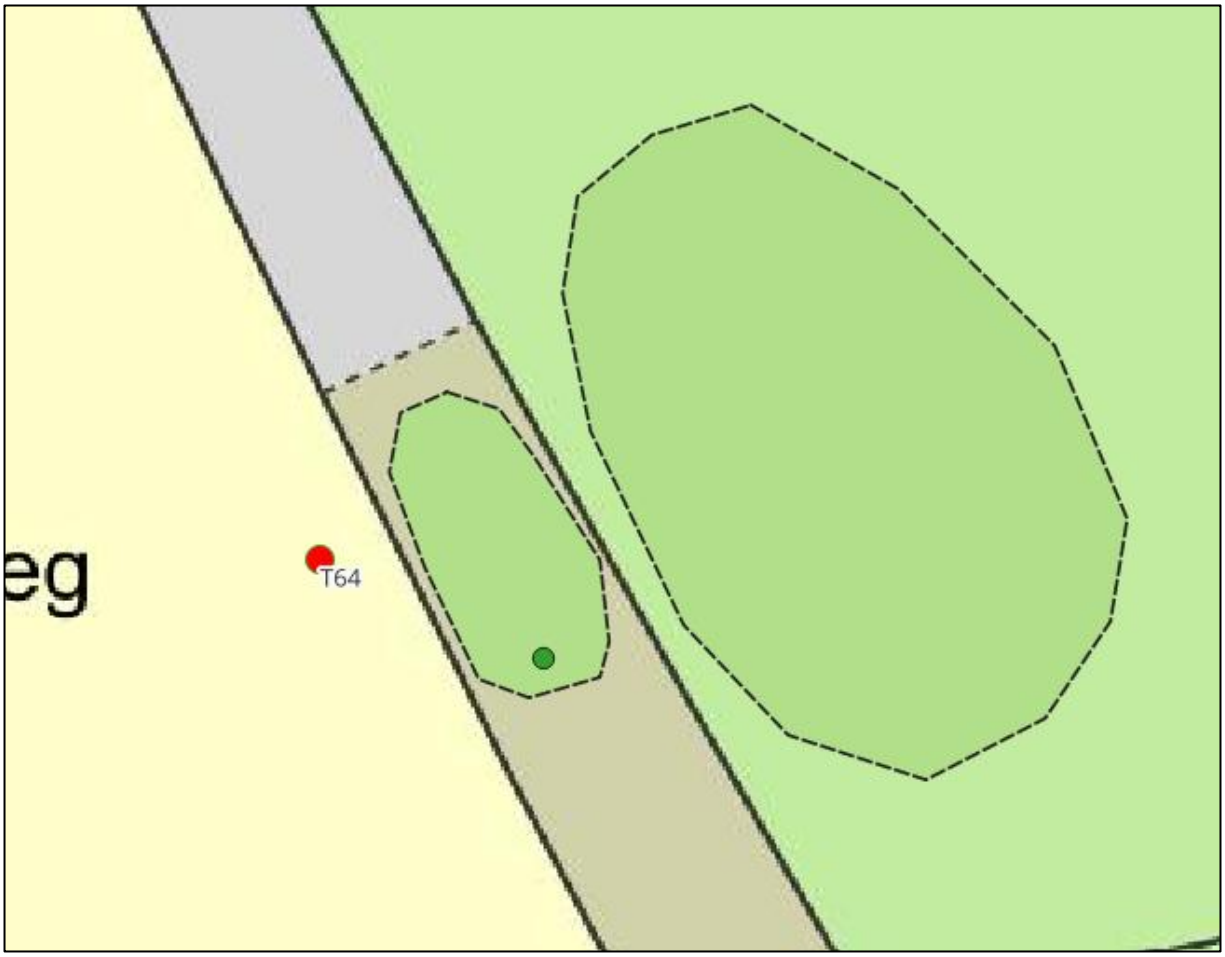


Figure 43: Summary of Bat Activity during the survey undertaken 22/07/2025.

Key					
	Surveyor and NVA Location		Commuting Lines		Notable Foraging areas
	Tree Location				

Figure 44: Roost Location Plan

Table 20: Locations, descriptions and photographs of roosts at Coleg Sir Gar, Pibwrlwyd Campus

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
1	1	Common pipistrelle	Roost located within a black bat box externally mounted on the southern elevation of the tower block on B1 (Grid reference: SN 41130 18308). Roost found to support a peak count of 1 common pipistrelle.	Day Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
1	2	Common pipistrelle	Roost located within a black bat box located on the north-eastern corner of B1 (Grid reference: SN 41135 18333). Roost found to support a peak count of 1 common pipistrelle.	Day Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
1	3	Common pipistrelle	Maternity roost located under PVC cladding on northern elevation of B2 (Grid reference: SN 41124 18338). A peak count of 16 common pipistrelle bats seen emerging and re-entering the roost.	Maternity Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
2	4	Common pipistrelle	Roost located under wooden eaves beneath the pitched roof on the northern elevation of B2 (Grid reference: SN 41051 18322). Roost found to support a peak count of 3 common pipistrelles.	Day Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
2	5	Soprano pipistrelle	Roost located under wooden eaves on the western gable end of B2 (Grid reference: SN 41061 18319). A peak count of 33 soprano pipistrelle bats seen emerging and re-entering the roost.	Maternity Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
2	6	Common pipistrelle	Roost located under wooden eaves on western gable end of B2 (Grid reference: SN 41045 18316). Roost found to support a peak count of 3 common pipistrelles.	Day Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
3	7	Pipistrelle sp.	Roost located within externally mounted bat box on the western gable end of B3 (Grid reference: SN 41031 18282). Roost found to support individual pipistrelle sp. No echolocation when emerging, but based on observations of the size and flight pattern, was assessed to be pipistrelle sp.	Day Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
3	8	Pipistrelle sp.	Roost located within externally mounted bat box on the western gable end of B3 (Grid reference: SN 41032 18271). Roost found to support individual pipistrelle sp. No echolocation when emerging, but based on observations of the size and flight pattern, was assessed to be pipistrelle sp.	Day Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
3	9	Soprano pipistrelle	Roost located within externally mounted bat box on the western gable end of B3 (Grid reference: SN 41031 18282). Roost found to support individual soprano pipistrelles.	Day Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
3	10	Soprano pipistrelle	Roost located within externally mounted bat box on the western gable end of B3 (Grid reference: SN 41032 18271). Roost found to support individual soprano pipistrelles.	Day Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
6	11	Soprano pipistrelle	Roost located within externally mounted black bat box on the eastern elevation of B6 (Grid reference: SN 41247 18286). Roost found to support individual soprano pipistrelle.	Day Roost	

Building No.	Roost No.	Species	Description and Location of Roost	Roost Classification	Photograph
6	12	Pipistrelle sp.	Roost located within externally mounted bat box on the eastern elevation of B6 (Grid reference: SN 41247 18286). Roost found to support individual pipistrelle sp. No echolocation when emerging, but based on observations of the size and flight pattern, was assessed to be pipistrelle sp.	Day Roost	

Appendix 8c – Bat Activity Surveys

Surveys are ongoing, and the results of the surveys will be updated upon completion of the autumn transect survey in mid-September.

Appendix 8d – Badger Survey

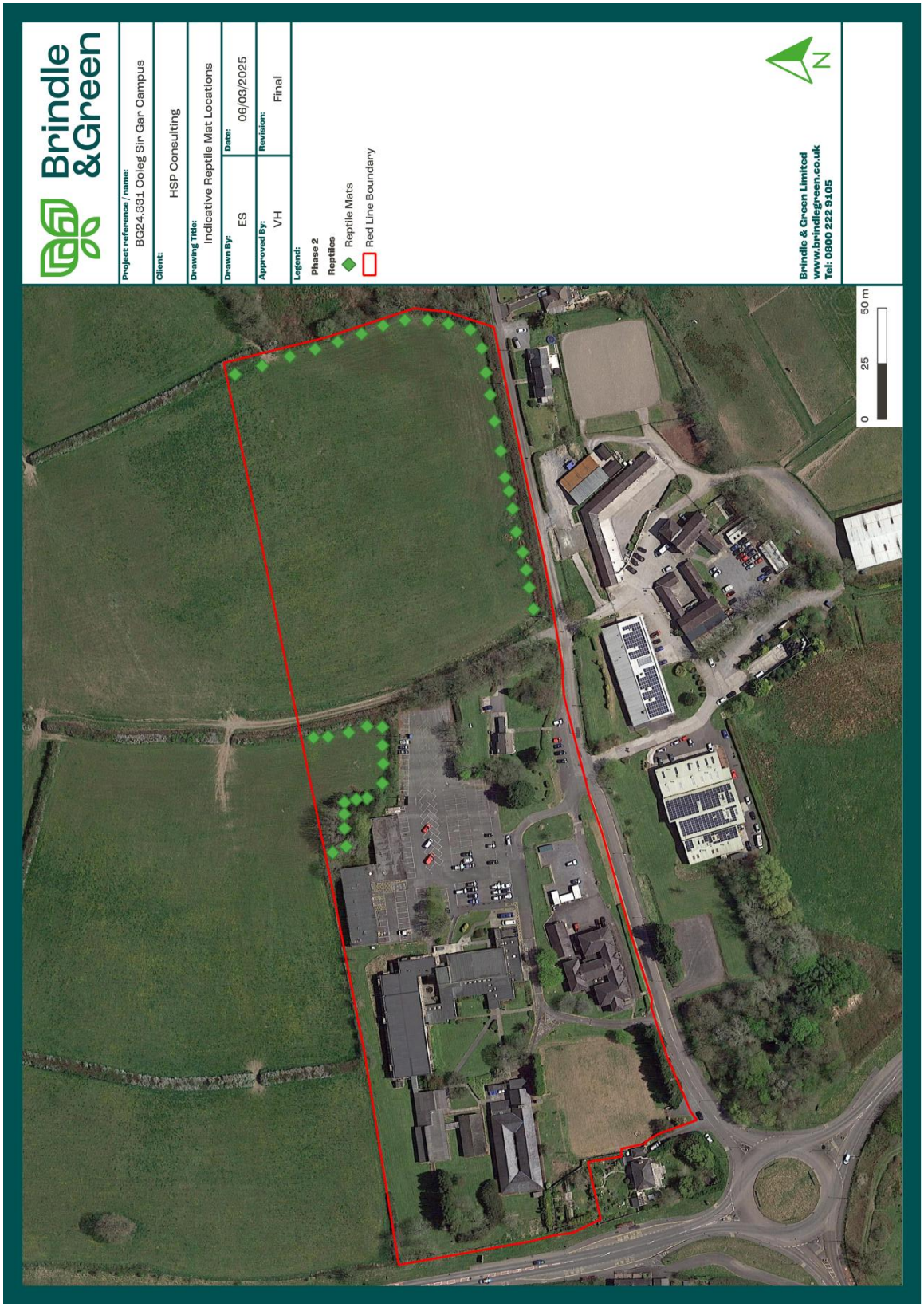
Survey Date / Time	Start Temp °C	End Temp °C	Cloud Cover	Humidity %	Wind Speed
28/04/2025 14:30	16	17	1	63%	BF1

Appendix 8e – Reptile Surveys

Table 21: Reptile Survey Results

Survey Date / Time	Start Temp °C	End Temp °C	Cloud Cover	Humidity %	Wind Speed	Findings
11/04/2025 10:30	15	16	1	80%	BF2	No Reptiles
17/04/2025 11:00	12	12	4	80%	BF1	No Reptiles
24/04/2025 10:45	14	14	5	77%	BF2	No Reptiles
02/05/2025 08:00	15	15	6	70%	BF2	No Reptiles
13/05/2025 09:45	18	18	3	77%	BF2	No Reptiles
02/06/2025 09:50	16	16	2	60%	BF2	No Reptiles
17/06/2025 09:30	17	17	7	80%	BF3	No Reptiles

Figure 45: Indicative Location of Reptile Mats at Coleg Sir Gar, Pibwrlwyd Campus.



Appendix 8f – Hazel Dormouse Surveys

Figure 46: Location of Dormouse Nest Tubes at Coleg Sir Gar, Pibwrlwyd Campus.

Table 22: Photographs taken during Hazel Dormouse Visit in June 2025.

Photograph	Description
	Dormouse nest found within nest tube on the eastern boundary hedgerow of the site (Grid reference: SN 41425 18303).
	Adult dormouse observed using same nest tube on 27th June 2025 (Grid reference: SN 41425 18303).