



Preliminary Roost Assessment and Bat Emergence and Re-entry Surveys

Cefn Farm, Cefn Road, Bwlchgwyn, Wrexham, LL11 5YD

Caroline Prytherch

Status	Issue	Name	Date
Draft	1	Mel Reid BSc (Hons) MRes MRSB, Senior Consultant	19/06/2023
Reviewed	1.1	Lizi Pimlott BSc (Hons) MSc MCIEEM MRSB, Principal Ecologist	14/07/2023
Final	2	Mel Reid BSc (Hons) MRes MRSB, Senior Consultant	14/07/2023

Arbtech Consultant's Contact Details:

Mel Reid BSc (Hons) MRes MRSB
Senior Ecological and Arboricultural Consultant
Tel: 07711591700 **Email:** melreid@arbtech.co.uk
<https://arbtech.co.uk>

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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Ltd was instructed by Caroline Prytherch to undertake a Preliminary Roost Assessment (PRA) and Bat Emergence and Re-entry Surveys (BERS) at Cefn Farm, Cefn Road, Bwlchgwyn, Wrexham, LL11 5YD (hereafter referred to as “the site”). A previous Preliminary Roost Assessment (PRA) and Bat Emergence/Re-entry Surveys (BERS) were carried out by Arbtech Consulting Limited in 2017 (Arbtech 2017), to inform the planning application for the conversion of the existing barn building to a dwelling. The previous surveys confirmed the presence of a day roost of common pipistrelles within B1. The development (conversion of derelict barn to a dwelling) was carried out prior to a European Protection Species Licence (EPSL) from Natural Resource Wales being applied for and obtained. As such these surveys have been undertaken to understand the current condition of the site.

Feature	Survey Results Summary	Impact Assessment	Recommendations
B1	The 2017 PRA and BERS concluded the presence of a day roost of common pipistrelle within B1. The itself is no longer considered suitable for roosting bats due to a lack of suitable bat roosting features. The new roof structure has been constructed using a Type 1F Bitumen Felt, however gaps are no longer present across the roof structure due to the re-roof and as such bats no longer have access to the roof structure for roosting. However, there are three bat boxes present on the eastern, western and northern elevations of the building. These will provide suitable roosting habitat for crevice-dwelling bats and provide compensation for the lost previous bat roosts (i.e. day roost of common pipistrelles). The client has advised that the roof structure was stripped in September 2020 and that no bats were found during the roof strip.	The proposed works destroyed the day roost of common pipistrelle bats present within B1. This was undertaken without a European Protection Species Licence (EPSL) being obtained from Natural Resource Wales and without the involvement of a licensed bat consultant. However, three bat boxes have been installed across the building to provide compensation for the loss of this roost. The bat boxes have been installed 3m high and away from lighting and are a suitable specification for pipistrelle bats. These are considered appropriate compensation for the loss of the roost. Based on feedback from the client, no bats were present during the works and therefore no disturbance, killing or injury of bats occurred.	This report is considered sufficient to confirm the current functionality and usage of the site by bats. It summarises the findings of the previous bat surveys and outlines the works that have been completed at the site including the roofing membrane and mitigation measures implemented and how these align with licensing requirements and subsequent impacts to bats. Given the works are complete and compensation has been provided no further survey or mitigation requirements are considered necessary as there is no further risk to roosting bats.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Caroline Prytherch to undertake a Preliminary Roost Assessment and Bat Emergence and Re-entry Surveys (BERS) at Cefn Farm, Cefn Road, Bwlchgwyn, Wrexham, LL11 5YD (hereafter referred to as “the site”). A previous Preliminary Roost Assessment (PRA) and Bat Emergence/Re-entry Surveys (BERS) were carried out by Arbtech Consulting Limited in 2017 (Arbtech 2017), to inform the planning application for the conversion of the existing barn building to a dwelling. The previous surveys confirmed the presence of a day roost of common pipistrelles within B1. The development (conversion of derelict barn to a dwelling) was carried out prior to a European Protection Species Licence (EPSL) from Natural Resource Wales being applied for and obtained. The proposed development (conversion of derelict barn to a dwelling) was carried out prior to a European Protection Species Licence (EPSL) from Natural Resource Wales being applied for and obtained. Following the completed works, NRW provided the following advice:

Considering the works that have been undertaken, we advise that further information is submitted in the form of an updated ecological report which:

- *confirms the functionality and usage of the site for bats;*
- *clarifies the extent of the works carried out at the bat roost location;*
- *includes details about the roofing membrane installed and mitigation measures implemented regarding the bat roost and roosting opportunities provided;*
- *includes details about how these accord with any applicable species licensing requirements;*
- *provides recommendations for any additional mitigation that may be required to avoid long-term adverse effects on the population of the bat species concerned*

As such these surveys and subsequent report have been conducted to provide the above information.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference SJ 2724 5405 and has an area of approximately 0.3ha. There are three buildings on the site. Building B1 was subject to survey. Buildings 2 and 3 were not subject to survey as these have not been affected by the proposed development. The site provides suitable bat foraging and commuting habitat in the form of grassland and hedgerows. Further suitable habitat is present across the wider landscape, including woodlands and hedgerows. A site location plan is provided in Appendix 2.

1.3 Scope of the Report

This report provides a description of all features suitable for roosting, foraging and commuting bats along with the bat activity observed and recorded during BERS. The aim of the surveys was to determine the presence or likely absence of bats and to characterise any roosts present including species, number of individuals, number and location of roost access points, and to gain an understanding of how bats use the site. The report provides information on possible constraints to the proposed development as a

result of bats and summarises the requirements for any mitigation proposals, including a European Protected Species Licence (EPSL), where appropriate, to achieve planning or other statutory consent and to comply with wildlife legislation. To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken, including an inspection of built structures, to determine the presence or the suitability of any features which bats could use for roosting and to assess the suitability of the site's bat foraging and commuting habitat.
- BERS of built structures has been undertaken to determine the presence or likely absence of bat roosts.
- An outline of potential impacts on any confirmed or unidentified roosts has been provided, based on the proposed development.
- Recommendations for mitigation have been made, along with advice on the requirements for a European Protected Species Licence (EPSL) application if appropriate.
- Opportunities for the enhancement of the site for roosting, foraging and commuting bats have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a 2km radius review of statutory designated sites with bat qualifying interests and granted EPSL records for bats held on magic.gov.uk database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps. Existing bat records relating to the site and a surrounding 2km radius were obtained from COFNOD in 2017. The data search is confidential information that is not suitable for public release and has been analysed and summarised for presentation in this report.

2.2 Field Survey

The survey was undertaken by Mel Reid (accredited agent Natural Resource Wales Bat Licence Number: S091515/1) on 16th May 2023.

The PRA focussed on one built structure which will be affected by the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed buildings:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the building for features which bats could use for roosting, including access or egress points and for signs of bat use including droppings, scratch marks, insect remains and urine smear marks. An internal inspection of the building was also made, including the living areas and any accessible roof spaces, using a torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space

2.3 Breeding Birds and Other Incidental Observations

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for barn owls.

2.4 Suitability Assessment

Built structures were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Features of a building that are correlated with use by bats

Classification	Feature of building and its context
High	Buildings or structures with features of particular significance for larger numbers of roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data). Buildings with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Moderate	Buildings or structures with one or more features suitable for more regular roosting due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation value such as maternity or hibernation roosts. Continuous habitat connected to the wider landscape which could be used by bats for commuting such as lines of trees, linked gardens. Foraging habitat in the surrounding area such as trees, scrub, grassland or water.
Low	Buildings or structures with one or more features suitable for use sporadically by individual or small numbers of bats. Potential roost features may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators. Habitat suitable for foraging in close proximity, but largely isolated in the landscape. Or an isolated site not connected by prominent linear features.
Negligible	Unsuitable for use by bats.

2.5 BERS

One BERS, comprising one dusk emergence survey, was undertaken of B1. The survey involved surveyors positioned around the building ensuring that all elevations and roof sections with suitable roosting features could be clearly observed. Particular attention was paid to the areas of the building identified as providing suitable access points to bat roosts. Each surveyor was assigned an area of the building to observe for the duration of the survey.

Surveyors used heterodyne and frequency division bat detectors, and Echo Meter Touch detectors connected to iPads or Android tablets. Bat echolocation calls recorded during the surveys were analysed using Wildlife Acoustics sound analysis software Kaleidoscope V3.1.7 when required. The Echo Meter Touch includes an auto ID function for bat species, however this is not 100% accurate and further post-survey sound analysis is often required to confirm species that could not be identified by the auto ID software during the survey. Surveyors also used head torches, survey record sheets and pens/pencils for recording all activity observed during the surveys. Each surveyor

was also provided with a handheld radio for communication between surveyors to assist with confirming ambiguous bat activity e.g. a bat emergence or a bat passing over the building.

One infrared recording kit was set up to monitor the building during the BERS. This comprised Nightfox Red Goggles set up on a tripod with two separate infrared lamps on a second tripod to provide additional illumination. Analysis of the footage was subsequently undertaken to detect roosting activity.

Dusk emergence surveys commenced 15 minutes before sunset and continued for 1½ - 2 hours after sunset – depending upon bat activity and surveyor visibility.

Surveys were completed during optimal weather conditions i.e., when temperatures were above 10°C, with no rain or strong winds (greater than 5m/s), as these adverse weather conditions can impact upon bat emergence and foraging behaviour. Periods of high moon illuminance (>80%) were also avoided insofar as possible as this can reduce bat activity.

2.6 Surveyors

A total of two surveyors were used to cover B1. The name, bat licence details or level of bat survey experience and the designated position of each surveyor during each survey is detailed in the tables in Section 3.1 below and shown on the plan in Appendix 3.

2.7 Bat Roost Characterisation

When bat roosts are present, the bat surveys undertaken at a site facilitate the characterisation of the roost type. This allows for appropriate mitigation and compensation to be designed to inform a European Protected Species Licence (EPSL) application to Natural Resources Wales.

The definitions of bat roost types are provided below, taken from the *Bat Mitigation Guidelines* (English Nature, 2004) and the Bat Conservation Trust (BCT) publication *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, 2016).

Day roost: a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.

Night roost: a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.

Feeding roost: a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.

Transitional / occasional roost: used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.

Swarming site: where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites

Mating sites: sites where mating takes place from later summer and can continue through winter.

Maternity roost: where female bats give birth and raise their young to independence.

Hibernation roost: where bats may be found individually or together during winter. They have a constant cool temperature and high humidity. Sites where hibernating bats have been confirmed by appropriate survey effort should be classed as 'hibernation confirmed'.

Preliminary Roost Assessment and Bat Emergence and Re-entry Surveys

Satellite roost: an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

Other: roost types are interchangeable and not always easy to classify according to the nuances of certain species.

2.8 Limitations

This survey follows best practice guidance to confirm presence or likely absence of roosting bats and where present, characterise the roost. However, this information is collected at finite dates and times, and provides an indication of the conditions on site only. The use of the building, and the site as a whole by bats, at all times cannot be established based on this information. Bats are highly mobile creatures that switch roosts regularly and therefore the usage of a site by bats can change over a short period of time.

3.0 Results and Evaluation

3.1 Designated Sites

No statutory designated sites with bat qualifying interests were identified within a 2km radius of the site, however other designations within a 2km radius are present which may provide suitable bat foraging and commuting habitat. The designation details including their reasons for notification, are provided in Table 2 below.

Table 2: Statutory designated sites with bat qualifying interests within 2km radius of the site

Designated site name	Distance from site	Reasons for notification from Natural Resources Wales
Glascoed Wood – Local Wildlife Site (LWS)	90m north-east	Habitats: ‘Marsh/marshy grassland, Semi-improved neutral grassland, Semi-natural broad-leaved woodland.’
Nant y Ffrith (LWS)	200m north	Habitats: ‘Acid dry dwarf shrub heath, Coniferous plantation, Semi-improved acid grassland, Semi-improved neutral grassland, Semi-natural broad-leaved woodland.’

3.2 Historical Records

Bat records have been returned by COFNOD within 2km of the site. Records from the last ten years are summarised in Table 3.

Table 3: Historical records of bats within 2km of the site

Common name	Number of records	Date of most recent record	Roost records
Daubenton’s bat	2	1987	0
Lesser horseshoe	2	2008	0
Long-eared species	1	1987	0

3.3 PRA Results

The weather conditions recorded at the time of the survey are shown in Table 4. The results of the field survey are detailed in Table 5 and illustrated in Appendix 3.

Table 4: Weather conditions during the survey

Date:	16/05/2023
Temperature	11°C
Humidity	68%
Cloud Cover	30%
Wind	8mph
Rain	None

Table 5: PRA Results

Feature	Description	Photographs
Bat foraging and commuting habitat	Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of grassland, hedgerows and introduced shrubs. These habitats are likely to provide micro-climatic conditions that support invertebrates that will in turn provide foraging opportunities for local bat populations. Most notably, the hedgerows on site are mature and extend beyond the site adding to the continuity of vegetated linear features present in the wider landscape. Bats are well known to utilise linear features to aid navigation whilst travelling between foraging resources and roost sites. Across the wider landscape are hedgerows and woodland providing further suitable bat foraging habitats.	
B1 from 2017 survey	During the 2017 PRA, prior to the works on site B1 was described as follows: "The building is a two-storey detached barn, there are six sections of the barn – on the ground floor there is a workshop (no evidence found), stables in the centre (no evidence found), two small storage areas on each end of the building (evidence found in southern storage area) and an attached extended metal storage area (no evidence found – negligible potential for bats) and two upper storage areas (evidence found). The south of the building (refer to opposite photo) has a pitched roof which is constructed of concrete tiles with a concrete ridge. The tiles overall are in an acceptable condition - there are several raised tiles which provide suitable roosting habitat for crevice dwelling bat species such as pipistrelles and myotis bats. Bat droppings were found during the survey in the two upper storey sections of the barn and the timber storage area on the south elevation. Numbers were small and appeared to be older than the previous season and therefore it is suspected that the barn is a historical day roost or used occasionally as a night feeding roost"	

B1 - overview	B1 is a stone-built barn building which was recently been converted to a dwelling. The walls are constructed from stone. The roof is pitched and clad in slate roof tiles. There are a number of dormer windows across the roof structure, which also have pitched roofs clad in slate tiles. The windows and door are UPVC framed. There is a single-storey breezeblock extension on the northern elevation which has a sloped roof clad in slate tiles also. The soffits and bargeboards are all wooden.	
B1 - southern elevation	The southern elevation has a sloped roof which appears in an excellent condition due to the recent roof replacement resulting in a lack of gaps suitable for roosting bats. There is a single-storey dormer window on this elevation with a pitched roof.	

B1 – eastern elevation

There is a large gable-end on the southern end of the eastern elevation. The stonework across this elevation appears in a good condition with no gaps suitable for roosting bats. the wooden soffits are tight-fitting to the walls with no gaps suitable for roosting bats. A bat box suitable for crevice-dwelling species has been installed on this elevation (circled in red), as compensation for the loss of the bat roosts previously present within the building.



B1 – northern elevation

There northern elevation consists of a gable-end with a single-storey extension. The stonework and breezeblock walls offer no gaps suitable for roosting bats. the slate tiles on the sloped roof structure are tight-fitting with no gaps suitable for roosting bats. A bat box suitable for crevice-dwelling species has been installed on this elevation (circled in red), as compensation for the loss of the bat roosts previously present within the building.



B1 – western elevation	The western elevation consists of a gable-end to the southern. There are three dormer windows across the roof structure, which all have pitched roofs clad in slate tiles. The roof structure on this elevation appears in excellent condition with no gaps suitable for roosting bats. A bat box suitable for crevice-dwelling species has been installed on this elevation (circled in red), as compensation for the loss of the bat roosts previously present within the building.	
B1 – interior	Internally there is one loft space within the main roof void of B1. The loft space is small with the roof height of less than 1m as the majority of the roof void forms habitable living areas. The internal roof structure is constructed from timber beams. There are insulation panels lining the roof. Some of these panels were removed to allow an inspection of the roof lining which revealed a Type 1F bitumen felt lining present. No daylight could be seen entering the loft space indicating a lack of access points for bats.	

		
B1 suitability assessment	– The building is now deemed negligible for roosting bats due to a lack of external features suitable for crevice-dwelling bats and a lack of access to the internal areas of the building.	

3.4 BERS Results

The results of the survey are provided in the table below and shown on the plan in Appendix 3.

Table 6: Survey results

Date		16/05/2023
Start and end times		20:52 – 22:37 Sunset: 21:07
Weather conditions		Start: Temp: 11°C Relative Humidity: 68% Cloud Cover: 30% Wind: 8mph Rain: None End: Temp: 10°C Relative Humidity: 74% Cloud Cover: 30% Wind: 7mph Rain: None
Surveyor (position) As shown in Appendix 3		Mel Reid – accredited agent Natural Resource Wales Bat Licence Number: S091515/1- Position 1 – observing the south and west elevation and roof structure of B1 Ryan Foster - 2 years bat survey experience - Position 2 – observing the north and east elevation and roof structure of B1
IR position As shown in Appendix 3		Position 1 - observing the south and west elevation and roof structure of B1
Building reference	Surveyor position	Notes/observations:
B1	1	No roosting activity was noted across B1 during the survey (including the installed bat boxes). The first bat activity recorded was a distant pass by a noctule at 21:30 which was heard on the detector only and not seen. Common pipistrelle activity started at 21:41 and consisted of commuting across the site and foraging within the garden areas of the site. The last activity recorded was a distant common pipistrelle past at 22:08. No further activity was noted.
B1	2	No roosting activity was noted across B1 during the survey (including the installed bat boxes). The only activity recorded was a distant common pipistrelle pass at 22:04. No further activity was noted.
Building reference	IR position	Notes/observations:
B1	1	No bats were seen emerging from or re-entering the building upon review of the IR footage (see view of IR camera below).



4.0 Conclusions, Impacts and Recommendations

Taking the field survey results into account, Table 7 presents an evaluation of the value of the buildings for roosting bats following the works already carried out site.

Table 7: Evaluation of buildings on site for roosting bats

Building	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
B1	The 2017 PRA and BERS concluded the presence of a day roost of common pipistrelle within B1. The itself is no longer considered suitable for roosting bats due to a lack of suitable bat roosting features. The new roof structure has been constructed using a Type 1F Bitumen Felt, however gaps are no longer present across the roof structure due to the re-roof and as such bats no longer have access to the roof structure for roosting. However, there are three bat boxes present on the eastern, western and northern elevations of the building. These will provide suitable roosting habitat for crevice-dwelling bats and provide compensation for the lost previous bat roosts (i.e. day roost of common pipistrelles). The client has advised that the roof structure was stripped in September 2020 and that no bats were found during the roof strip.	The proposed works destroyed the day roost of common pipistrelle bats present within B1. This was undertaken without a European Protection Species Licence (EPSL) being obtained from Natural Resource Wales and without the involvement of a licensed bat consultant. However, three bat boxes have been installed across the building to provide compensation for the loss of this roost. The bat boxes have been installed 3m high and away from lighting and are a suitable specification for pipistrelle bats. These are considered appropriate compensation for the loss of the roost. Based on feedback from the client, no bats were present during the works and therefore no disturbance, killing or injury of bats occurred.	This report is considered sufficient to confirm the current functionality and usage of the site by bats. It summarises the findings of the previous bat surveys and outlines the works that have been completed at the site including the roofing membrane and mitigation measures implemented and how these align with licensing requirements and subsequent impacts to bats. Given the works are complete and compensation has been provided no further survey or mitigation requirements are considered necessary as there is no further risk to roosting bats.	The following enhancements will be implemented across the site: - Two bat access tiles will be added to the new roof. These can be created by placing mortar or lead flashing plugs at the base of the roof tiles to create a 2cm gap. - Two bird boxes are to be installed on mature trees across the site. Suitable boxes include Vivara Pro Seville 32mm WoodStone Nest Box. These should be installed between 1.5m and 3m ideally facing towards vegetation. - Two bat boxes to be installed on mature trees across the site. Suitable boxes include Beaumaris Woodstone Bat Box. These should be installed on mature trees at a minimum height of 3m, ideally facing south/south-west. - Wildflower planting

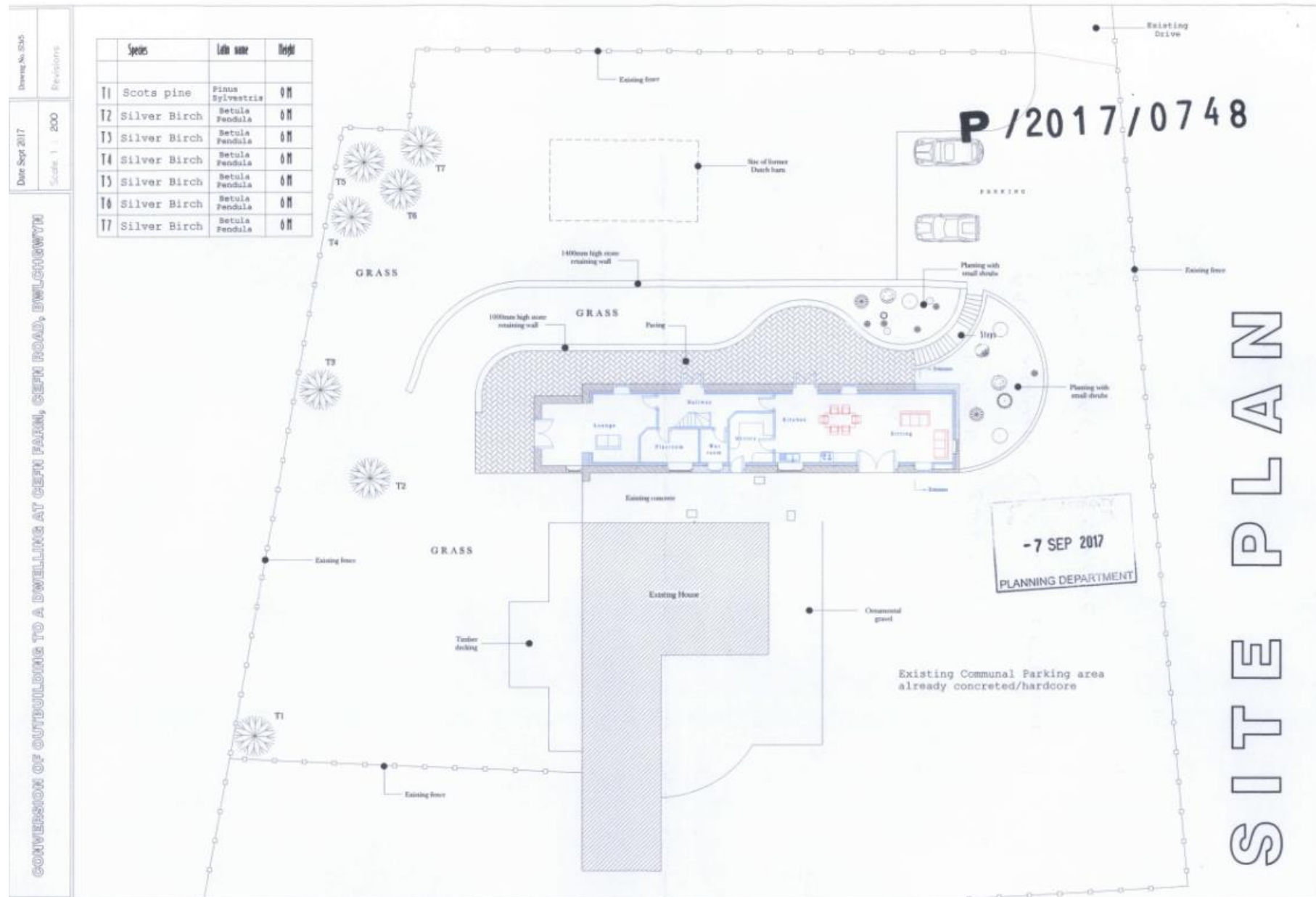
¹ The Local Planning Authority has a duty to ask for enhancements under the Planning Policy Wales (2021).

				Native tree planting
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5.0 Bibliography

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Appendix 1: Proposed Development Plan



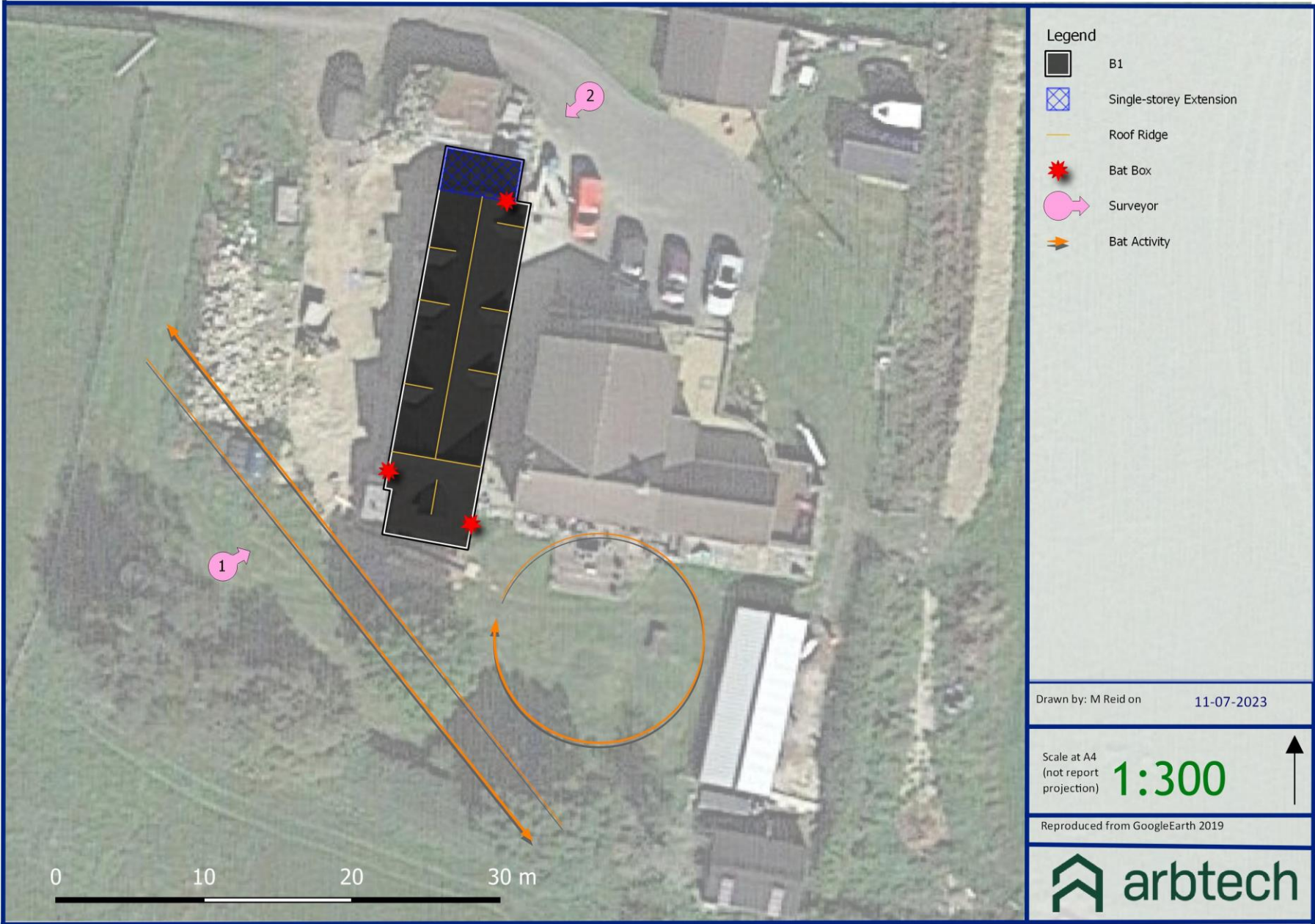
Appendix 2: Site Location Plan



Appendix 3a: PRA Plan



Appendix 3b: BERS Plan



Appendix 4: Legislation and Planning Policy Related to Bats

LEGAL PROTECTION

All species of bat are fully protected under ***The Conservation of Habitats and Species Regulations 2017*** (as amended) through their inclusion on Schedule 2.

Regulation 43: Protection of certain wild animals - offences

(1) A person is guilty of an offence if they:

- (a) Deliberately captures, injures or kills any wild animal of a European protected species,
- (b) Deliberately disturbs wild animals of any such species,
- (c) Deliberately takes or destroys the eggs of such an animal, or
- (d) Damages or destroys a breeding site or resting place of such an animal,

(2) For the purposes of paragraph (1) (b), disturbance of animals includes in particular any disturbance which is likely—

- (a) To impair their ability:
 - (i) To survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- (b) To affect significantly the local distribution or abundance of the species to which they belong.

Bats are also protected under the ***Wildlife and Countryside Act 1981*** (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

NATIONAL PLANNING POLICY

Environment (Wales) Act 2016 and the Biodiversity Duty

The Environment (Wales) Act 2016 introduces a new biodiversity duty, which highlights biodiversity as an essential component of ecosystem resilience. This new duty replaces the biodiversity duty in the Natural Environment and Rural Communities Act 2006 (referred to as the NERC Act). Part 1 of the Act deals with Sustainable management of natural resources including Biodiversity and Resilience of Ecosystems Duty. The Environment Act enhances the current NERC Act duty to require all public authorities, when carrying out their functions in Wales, to seek to “maintain and enhance biodiversity” where it is within the proper exercise of their functions. In doing so, public authorities must also seek to “promote the resilience of ecosystems”. As under the NERC Act the new duty will apply to a range of public authorities such as the Welsh Ministers, local authorities, public bodies and statutory undertakers. This ensures that biodiversity is an integral part of the decisions that public authorities take in relation

to Wales. It also links biodiversity with the long-term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

Planning Policy Wales (2021)

Paragraph 6.4.3 of the document refers to Biodiversity and Ecological Networks and states:

The planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Addressing the consequences of climate change should be a central part of any measures to conserve biodiversity and the resilience of ecosystems. Information contained in SoNaRR, Area Statements and species records from Local Environmental Record Centres should be taken into account. Development plan strategies, policies and development proposals must consider the need to:

- support the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- ensure statutorily and non-statutorily designated sites are properly protected and managed;
- safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
- secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

Biodiversity and Resilience of Ecosystems Duty (Section 6 Duty)

Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. Planning authorities must also take account of and promote the resilience of ecosystems, in particular the following aspects:

- a) Diversity between and within ecosystems;
- b) The connections between and within ecosystems;
- c) The scale of ecosystems;
- d) The condition of ecosystems (including their structure and functioning); and
- e) The adaptability of ecosystems.

In fulfilling this duty, planning authorities must have regard to:

- a) The list of habitats of principal importance for Wales, published under Section 7 of the Environment (Wales) Act 2016;
- b) The State of Natural Resources Report (SoNaRR), published by NRW; and
- c) Any Area Statement that covers all or part of the area in which the authority exercises its functions.

Planning Authorities should also refer to up to date ecological survey information (where appropriate).

A proactive approach towards facilitating the delivery of biodiversity and resilience outcomes should be taken by all those participating in the planning process. In particular, planning authorities should demonstrate that they have sought to fulfil the duties and requirements of Section 6 of the Environment Act by taking all reasonable steps to maintain and enhance biodiversity in the exercise of their functions.

The broad framework for implementing the duty and building resilience through the planning system includes addressing:

- **Diversity:** to ensure mechanisms are in place to minimise further loss and that circumstances allow for species' populations to expand and recolonise their natural range (former range) or adapt to future change. This means development should provide a net benefit for biodiversity, and at the very least, with no significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity;
- **Extent:** to ensure mechanisms allow for the maintenance of existing assets and networks and promote the restoration of damaged, modified or potential habitat and the creation of new habitat. This means that planning choices should incorporate measures which seek the creation and restoration of green networks and linkages between habitats and maintaining and enhancing other green infrastructure features and networks;
- **Condition:** Ecosystems need to be in a healthy condition to function effectively, to deliver a range of important ecosystem services. Planning decisions should not compromise the condition of ecosystems. By taking an integrated approach to development, for example, which considers both direct and wider impacts and benefits it should be possible to make a positive contribution. Planning for the long term management of retained habitats is key to maintaining condition through for example, the use of planning obligations;
- **Connectivity:** to take opportunities to develop functional habitat and ecological networks within and between ecosystems and across landscapes, building on existing connectivity and quality and encouraging habitat creation, restoration and appropriate management. The opportunities could include enlarging habitat areas, developing buffers around designated sites or other biodiversity assets or corridors, including transport and river corridors, and the creation of 'stepping stones' which will strengthen the ability of habitats and ecological networks to adapt to change, including climate change; and
- **Adaptability to change:** primarily in the form of climate change, for both species (diversity) and ecosystems requires action to protect the extent, condition and connectivity of habitats, features and ecological networks. Development plans, planning proposals and applications which build on protecting designated sites and securing and enhancing green infrastructure will be key ways of addressing the attributes of ecosystems resilience identified in the Environment Act as well as facilitating social and economic resilience aspirations of the Well-being of Future Generations Act.

Good Practice Guide GPG 3 (October 2015) NRW Approach to Bats and Planning

As explained in Planning Policy Wales (Chapter 5 - Conserving and Improving Natural Heritage and the Coast), the presence of a European protected species is a material consideration for a development proposal that would be likely to result in disturbance or harm to the species or its breeding sites or resting places. Planning Policy Wales also explains that planning authorities should seek the advice of Natural Resources Wales for all planning applications likely to result in disturbance or harm to bats and

should always consult them before granting permission. Local Planning Authorities address this by screening applications to identify when there is a reasonable likelihood that bats may be present and, therefore, when to require a bat survey and report that will confirm if bats are present and if they likely to be disturbed or harmed by the proposal. The overall requirement on Local Planning Authorities, Natural Resources Wales and developers is to avoid harm or disturbance to bats and their breeding sites and resting places, unless Natural Resources Wales has given a licence to allow the harm or disturbance. Natural Resources Wales may only give a licence if the requirements for derogation are met, including that disturbance or harm to individual bats (or to their breeding sites and resting places) would not be detrimental to the maintenance of the population.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by Natural Resources Wales will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored. The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008).

There are 17 species of bat breeding in Wales and Natural Resources Wales issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

Licences are issued for specific purposes stated in the Regulations, if the following three tests are met:

- The purpose of the work meets one of those listed in the Habitats Regulations (see below);
- That there is no satisfactory alternative;
- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range

The Habitats Regulations permits licences to be issued for a specific set of purposes including:

- include preserving public health or public safety or other imperative reasons of over-riding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- scientific and educational purposes;
- ringing or marking; and,
- conserving wild animals.

Development works fall under the first purpose and Natural Resources Wales issues bat mitigation licences for developments.