



Preliminary Roost Assessment and Bat Emergence/Re-entry Surveys

Plas Eyton, Eyton, Wrexham, LL13 0YD

John Wright

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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.

This approach is enshrined in Government planning guidance, for example, paragraph 174 of the National Planning Policy Framework for England.

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 Limited was instructed by John Wright to undertake a Preliminary Roost Assessment (PRA) and Bat Emergence/Re-entry Surveys at Plas Eyton, Eyton, Wrexham, LL13 0YD (hereafter referred to as “the site”). The survey was required to inform a planning application for the conversion of the existing barn outbuildings to a dwelling (hereafter referred to as “the proposed development”).

The following is work you will need to commission to obtain planning permission and to comply with legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 8 of this report.

Feature	Survey conclusions (with justification)	Foreseen impacts	Recommendations
Roosting bats (B1)	B1 was concluded as having moderate habitat value for supporting roosting bats due to the presence of a low number of features suitable for crevice-dwelling bats including gaps between roof slates and gaps along the eaves. The BERS confirmed a likely-absence of bats within B1.	Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on bats in this location as a result of the proposed development.	None.
Roosting bats (B2)	B2 was also concluded as having moderate habitat value for supporting roosting bats due to similar features present on B1. However, droppings were found within the small pig sty of B2 which were concluded to likely be deposited by a crevice-dwelling species such as common pipistrelle. The BERS confirmed the presence of a single common pipistrelle within this section of the building. It was concluded that the bat is roosting internally between the roof structure and wall on the northern side, accessed via the open window from on the southern elevation.	The proposed development will result in the removal of the metal roof structure where the bat roost is currently present to facilitate the construction of a new extension which will combine B1 and B2 into one single building. This will result in destruction to the bat roost and could cause disturbance, death or injury to bats.	An EPSL application to Natural Resources Wales will be required to legally permit the proposed works. The EPSL application requires that surveys have been undertaken within the most recent active bat season (May to September) and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission.
Foraging bats	There is suitable foraging habitat on site and across the surrounding landscape.	No suitable bat foraging habitat will be removed as a result of the proposed works.	None.
Nesting birds	The buildings offer no opportunities for nesting birds.	None.	None.
Other ecological constraints	None identified.	N/A	N/A

Contents

1.0 Introduction and Context	6
1.1 Background	6
1.2 Site Context	6
1.3 Scope of the Report	6
2.0 Methodology	8
2.1 Desk Study	8
2.2 PRA Field Survey	8
2.3 Breeding Birds and Other Incidental Observations	8
2.4 Suitability Assessment	8
2.5 BERS	9
2.6 BERS Surveyors	10
2.7 Limitations	10
3.0 Results and Evaluation	11
3.1 Desk Study Results	11
3.2 Designated Sites	11
3.3 Historical Records	11
3.5 PRA Field Survey Results	11
3.6 BERS Survey Results	21
4.0 Conclusions, Impacts and Recommendations	25
4.1 Informative Guidelines	25
4.2 Evaluation	26
5.0 Bibliography	29
Appendix 1: Proposed Development Plan	30
Appendix 2: Site Location Plan	31
Appendix 3: Bat Survey Plan (PRA)	32
Appendix 4: Bat Survey Plan (BERS)	33
Appendix 5: Legislation and Planning Policy Related to Bats	34

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by John Wright to undertake a Preliminary Roost Assessment (PRA) and Bat Emergence/Re-entry Surveys at Plas Eyton, Eyton, Wrexham, LL13 0YD (hereafter referred to as “the site”). The survey was required to inform a planning application for the conversion of the existing barn outbuildings to a dwelling. A plan showing the proposed development is provided in Appendix 1.

The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting. This has been undertaken with due consideration to the “Bat Surveys for Professional Ecologists —Good Practice Guidelines” publication (Collins, 2016).

The aim of the BERS was to determine the presence or likely absence of roosting bats and to characterise any roosts present. This has been undertaken with due consideration to the “Bat Surveys for Professional Ecologists —Good Practice Guidelines” publication (Collins, 2016).

1.2 Site Context

The site is located at National Grid Reference SJ 33366 45146 and has an area of approximately 0.36ha comprising buildings, hard standing and garden areas. It is surrounded by agricultural fields with scattered dwellings and roads.

A site location plan is provided in Appendix 2.

1.3 Scope of the Report

PRA

This report provides a description of all features suitable for roosting, foraging and commuting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any further surveys to inform subsequent mitigation proposals, 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 external survey and internal inspection of built structures and a ground level assessment of trees where possible, 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.
- An outline of potential impacts on any confirmed or unidentified roosts has been provided, based on the proposed development.

- Recommendations for further surveys and 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.

BERS

This report provides a description of 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:

- 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.

2.2 PRA Field Survey

The survey was undertaken by Mel Reid (accredited agent Natural Resource Wales Bat Licence Number: S091515/1) on 23rd August 2022.

The PRA focussed on two built structures 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 buildings 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. An endoscope was used to complete a close-up inspection of any accessible features, where appropriate.

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 *Tyto alba*.

2.4 Suitability Assessment

Built structures and trees 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 for buildings. 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
Moderate to 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.
Low	A small number of possible roost sites or features, used 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 isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.
Negligible	Unsuitable for use by bats.

2.5 BERS

Two BERS, comprising one dusk emergence survey and one dawn re-entry survey, were undertaken of B1 & B2, as per the recommendations from the Preliminary Roost Assessment. The surveys involved surveyors positioned around the buildings ensuring that all elevations and roof sections with suitable roosting features could be clearly observed. Particular attention was paid to the areas of the buildings identified as providing suitable access points to bat roosts (i.e. gable-end of terrace). Each surveyor was assigned an area of the buildings 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.

An 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. Dawn re-entry surveys commenced 2 hours before sunrise and continued until 15 minutes after sunrise.

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 BERS Surveyors

The lead surveyor was Mel Reid (accredited agent Natural Resource Wales Bat Licence Number: S091515/1) who was assisted by several surveyors, each with several years of bat survey experience. Three surveyors were used to provide sufficient cover of the building during each survey. 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 4.

2.7 Limitations

PRA

It should be noted that whilst every effort has been made to describe the features on site in the context of their suitability for roosting bats, this does not provide a complete characterisation of the site. This survey provides a preliminary view of the likelihood of bats being present. This is based on suitability of the habitats on site and in the local area, the ecology and biology of bats as currently understood. 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.

A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

BERS

These surveys follow 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.

There were no specific limitations to the surveys.

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of desk study results is provided below.

3.2 Designated Sites

There are no statutory designated sites within a 2km radius of the site.

3.3 Historical Records

A search of the Magic database for granted European Protected Species Mitigation Licences (EPSMLs) for bats within a 2km radius of the site was completed. However, this database only includes licences granted by Natural England. There is currently no online database of bat mitigation licences granted by Natural Resources Wales. As the 2km search radius does not cross the Wales-England border, it is not known if there are any nearby sites with bat mitigation licences issued by Natural Resources Wales.

3.5 PRA Field Survey Results

The PRA focussed on two built structures 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. The results of the field survey are illustrated in Appendix 3. The weather conditions recorded at the time of the survey are shown in Table 2.

Table 2: Weather conditions during the survey

Date: 23/08/2022	
Temperature	20°C
Humidity	68%
Cloud Cover	40%
Wind	5mph
Rain	None

Building B1 Exterior

B1 is a brick-built single-storey barn outbuilding with a mono-pitched roof clad in slate roof tiles. There are a number of raised slate roof tiles providing suitable roosting habitat for crevice-dwelling bats. The building is rendered on the western elevation and the rendering appears in a good condition with no gaps or cracks suitable for crevice-dwelling bats. There is exposed brickwork on the northern, eastern and southern elevation. There are gaps in the brickwork along the eastern elevation providing access into the building for bats. There are gaps along the eaves between the wall tops and roof structure providing further suitable roosting habitat for bats. There are skylights present across the roof structure.

Identified roosting features have been highlighted in the photos below.



Western elevation of B1 (pictured above).



Western elevation of B1 (pictured above).



Western elevation of B1 (pictured above).



Western elevation of B1 (pictured above).



Northern elevation of B1 (pictured above).



Northern elevation of B1 (pictured above).



Southern elevation of B1 (pictured above).



Eastern elevation of B1 (pictured above).

B1 Interior

Internally there are no loft spaces within B1. The interior is separated into rooms via internal rooms, which are open to the roof structure. The internal roof structure is constructed from modern timber beams and there is an internal roof lining. There are high levels of internal light due to the presence of the skylights reducing the suitability of the interior for void-dwelling bats. The interior of the building is currently as a workshop and as storage.



Interior of B1 (pictured above).



Interior of B1 (pictured above).

Building B2

B2 is a single-storey brick-built barn outbuilding with a mono-pitched roof clad in slate roof tiles. There are a number of gaps between the slate roof tiles providing suitable roosting habitat for crevice-dwelling bats. There is a gap along the southern eaves between the wall tops and roof structure. The building is partially rendered with some areas of exposed brickwork. The walls offer no suitable gaps for roosting bats. There is a small extension on the eastern elevation of B2 which has a mono-pitched roof constructed from corrugated metal panels, designated as B2a for the purpose of this report.



Southern elevation of B2 (pictured above).



Southern elevation of B2 (pictured above).



Southern elevation of B2 (pictured above).



Eastern elevation of B2 (pictured above).



Western elevation of B2 (pictured above).



Northern elevation of B2 (pictured above).



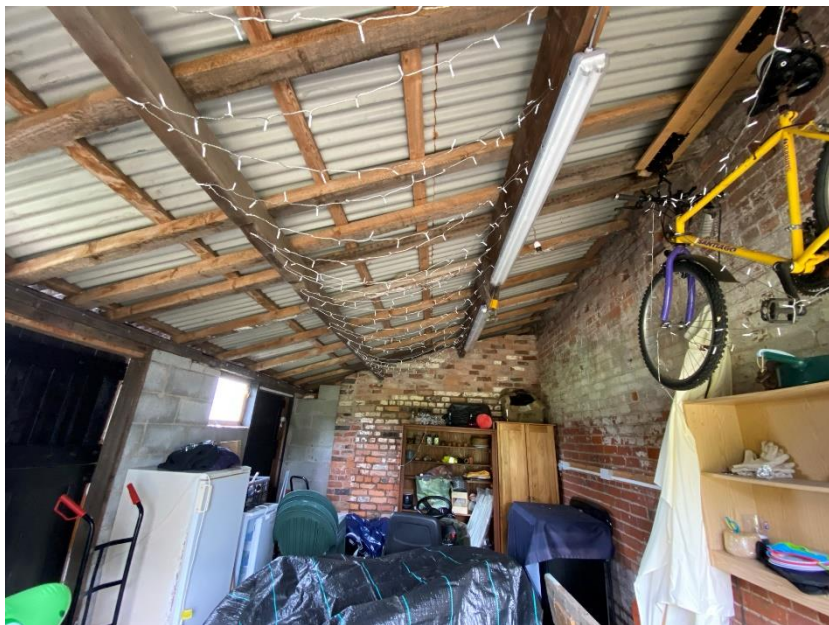
Eastern elevation of B2 (pictured above).



B2a (pictured above).

Building B2 Interior

There is one room within B2 which is open to the roof structure. The internal roof structure is constructed from timber beams with no roof lining present. There are high levels of internal light due to the presence of windows reducing the suitability of the area for void-dwelling bats. This area is currently used as storage. There are two rooms within B2a separated by an internal brick wall. Evidence of bats was found in this section of the building (see below).



Interior of B2 (pictured above).



Interior of B2 (pictured above).

B1 & B2 Evidence of bats

There was no evidence of bat activity located internally in B1. Although evidence of bat activity (e.g. droppings) on the outside of a building can be easily weathered away, no evidence was observed externally on any of the features suitable for roosting.

Less than 50 droppings were found within B2a, located on the back wall and across the floors, below a gap between the corrugated metal roof and brick wall. The size shape and colour and the droppings indicated that they were recently deposited by a crevice-dwelling species such as a pipistrelle. There were no access points to this gap located externally and as such it is considered likely that the bat(s) are entering through the small open window on the southern elevation and entering the gap internally.

B1 & B2 Breeding birds and other incidental observations

There was no evidence of active nesting birds located internally or externally on the survey buildings.



Droppings within B1a (pictured above).



Droppings within B1a (pictured above).

Foraging and Commuting Habitat

The site provides some suitable bat foraging habitat due to the presence of vegetation in the garden areas on site. There is further suitable habitat across the surrounding areas (i.e. fields, hedgerows and trees).

3.6 BERS Survey Results

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

Table 3: Survey results (first visit)

Date		30/08/22
Start and end times		19:45 – 21:36 Sunset: 20:06
Weather conditions		Start: Temp: 18°C Relative Humidity: 50% Cloud Cover: 60% Wind: 2mph Rain: None End: Temp: 17°C Relative Humidity: 60% Cloud Cover: 50% Wind: 2mph Rain: None
Surveyor (position) As shown in Appendix 3		Rebecca Beresford – Several years' experience conducting bat surveys (Position 1 – observing the eastern elevation and the roof structure of B1, and southern and eastern elevation and roof structure of B2 and B2a) Emma Gray – Several years' experience conducting bat surveys (Position 2 – observing the southern and eastern elevation and roof structure of B1) Steve Dickson – Several years' experience conducting bat surveys (Position 3 – observing the north and eastern elevations and roof structure of B2)
Building reference	Surveyor position	Notes/observations:
B1 & B2	1	The first bat activity was a soprano pipistrelle emergence at 20:29. A single bat was observed emerging from the window on the southern elevation of B2a (see below). 

		Constant common and soprano pipistrelle commuting, and foraging was noted across the site from this time until 21:31. Noctule feeding was also noted at 20:40 and 21:24. A myotis pass was recorded at 21:16 observed commuting across the site. A brown long-eared pass was recorded at 21:20 which was heard on the detector only.
B1	2	No bats were seen emerging from or re-entering the building during the survey. The first bat recorded was the distant pass of a common pipistrelle at 20:23 (16 minutes after sunset) Throughout the survey soprano and common pipistrelles were recorded foraging in the vegetation around B1. One noctule was recorded at 20:40 passing over B1. The final bat recorded was the distant pass of a common pipistrelle at 21:25. It was heard on the magenta and EMT, but not seen.
B2	3	No bats were seen emerging from or re-entering the building during the survey. Only two common pipistrelles were recorded during the survey. The first was at 20:24 (17 minutes after sunset) and the second was at 21:15. Both were heard on the magenta and EMT, but not seen.

Table 4: Survey results (second visit)

Date		14/09/22
Start and end times		19:15 – 21:00 Sunset: 19:30
Weather conditions		Start: Temp: 15°C Relative Humidity: 74% Cloud Cover: 100% Wind: 12mph (SE) Rain: None End: Temp: 13°C Relative Humidity: 79% Cloud Cover: 100% Wind: 9mph Rain: None
Surveyor (position) As shown in Appendix 3		Mel Reid – Accredited Agent on Natural Resources Wales Bat Licence Number: S091515/1 (Position 1 – observing the south west facing elevations and the roof structure of B1) Rebecca Beresford – Several years' experience conducting bat surveys (Position 2 – observing the south east and south elevation and roof structure of B1) Jon Roberts – Several years' experience conducting bat surveys (Position 3 – observing the north west and north east elevations and the roof structure of B1)
Building reference	Surveyor position	Notes/observations:
B1 + B2	1	One common pipistrelle emergence was recorded from this position The first bat recorded was a common pipistrelle emerging from B2a at 19:52 (22 minutes after sunset). The bat emerged through the window of B2 (see photo below) and the re-entered again. It emerged once more and then headed to south east. The final bat recorded was a common pipistrelle feeding in the distance from 19:55 to 20:02. 
B1 + B2	2	No emergences or re-entries were recorded from this position.

		The first bat recorded was a Soprano Pipistrelle feeding to the north west of B2 at 19:53 (23 minutes after sunset). Throughout the survey, more soprano pipistrelle activity was recorded, namely feeding around the gardens and trees near B1 and B2. The final bat recorded was a noctule passing overhead at 20:40.
B1 + B2	3	No emergences or re-entries were recorded from this position. Only two common pipistrelles were recorded during the survey. The first was at 19:55, appearing above the wall to the eastern end of B2 before disappearing again. Due to times recorded and surveyor positions, this is likely the same bat observed from position 1. The second common pipistrelle was recorded at 20:02. It was heard on the Magenta and EMT, but not seen.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

A summary of the relevant legislation and planning policies is provided in Appendix 5.

Bats

Bats are protected under the Wildlife and Countryside Act and the Conservation of Habitats and Species Regulations 2017 (amended by the Conservation of Habitats and Species Regulations (amendment) (EU Exit) Regulations 2019).

There are three possible outcomes of this survey, each with specific recommendations. These are outlined below:

Confirmed bat roost

Best practice survey guidelines (Collins, 2016) recommend additional surveys for confirmed roosts. Three further surveys are required to characterise the bat roost present including species, roost type and access points to inform an EPSL application to Natural England. Surveys must be completed during the active bat season (May – September). At least two of the surveys should be completed during the optimal survey period mid-May to August, and at least one of the surveys should be a dawn re-entry survey.

Low, moderate or high likelihood of a bat roost present

Best practice survey guidelines (Collins, 2016) recommend additional surveys for features assessed as having low to high suitability for roosting bats. One, two or three further surveys are required to confirm presence or likely absence of a bat roost, based on a low, medium or high roost likelihood evaluation. Surveys must be completed during the active bat season (May – September). If more than one survey is recommended, at least one of them should be completed during the optimal survey period mid-May to August, and at least one of the surveys should be a dawn re-entry survey. If two or one further survey is recommended these surveys must be completed during the optimal survey period (mid-May to August). For low and moderate roost likelihood evaluation the survey effort recommended at this stage is iterative and if bats roosts are confirmed in the building, a further survey will be required to provide sufficient information to inform an EPSL application to Natural England.

Negligible likelihood of a bat roost present

Buildings assessed as comprising negligible suitability for roosting bats do not normally require further surveys. However, if bats are found during any stage of the development, work should stop immediately, and a suitably qualified ecologist should be contacted for further advice.

Birds

Legislation protects all wild birds whilst they are breeding, and prohibits the killing, injuring or taking of any wild bird or their nests and eggs. Certain species of bird, including the barn owl, are subject to special provisions; it is an offence to disturb any bird or their young during the breeding season.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 7 presents an evaluation of the value of the site for bats and also details any other ecological constraints identified such as nesting birds in relation to the proposed development which will comprise the conversion of the existing barn outbuildings to a dwelling.

Table 8: Evaluation of the site for bats and any other ecological constraints

Feature	Survey conclusions (with justification)	Foreseen impacts	Recommendations <i>Measures required to adhere to guidance, legislation and planning policies.</i>	Biodiversity Enhancements <i>The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021) and Wrexham Unitary Development Plan</i>
Roosting bats (B1)	B1 was concluded as having moderate habitat value for supporting roosting bats due to the presence of a low number of features suitable for crevice-dwelling bats including gaps between roof slates and gaps along the eaves. The BERS confirmed a likely-absence of bats within B1.	Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on bats in this location as a result of the proposed development.	None.	The installation bat boxes on mature trees around the site boundaries or will provide additional roosting habitat for bats e.g. 2F Schwegler Bat Box 1FF Schwegler Bat Box 2FN Schwegler Bat Box Beaumaris Bat Box Vivara Pro Woodstone Bat Box Or a similar alternative brand. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light.
Roosting bats (B2)	B2 was also concluded as having moderate habitat value for supporting roosting bats due to similar features present on B1. However, droppings were found within the small pig sty of B2a which were concluded to likely be deposited by a crevice-dwelling species such as common pipistrelle.	The proposed development will result in the removal of the metal roof structure where the bat roost is currently present to facilitate the construction of a new extension which will combine B1 and B2 into one single building. This will	The survey data provides sufficient information to be able to conclude likely impacts on bats as a result of the proposed development. The completion of a third BERS is unlikely to yield any significantly different results An EPSL application to Natural Resources Wales will be required to legally permit the proposed works. The EPSL application requires that surveys have been undertaken within the most recent active bat season (May to September) and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission.	

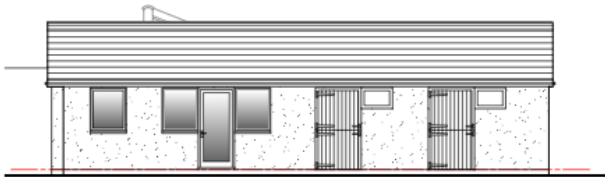
	The BERS confirmed the presence of a day roost of a single common pipistrelle within this section of the building. It was concluded that the bat is roosting internally between the roof structure and wall on the northern side, accessed via the open window from on the southern elevation.	result in destruction to the bat roost and could cause disturbance, death or injury to bats.	A Material Changes Check will be required within three months of the EPSL submission, if no survey work has been undertaken within that period. The EPSL will detail any mitigation and compensation measures that will be required for the proposed development to comply with the standing advice and will be designed to reduce any impacts to an acceptably low level so as to maintain (or enhance) the Favourable Conservation Status (FCS) of the local bat population. The EPSL will include the following measures: • The installation of one bat box at the site (one bat box per bat species) prior to works commencing to form a receptor site for any bats found during the works. These boxes may be installed on buildings or trees but must be in an undisturbed location and will need to be maintained in this location post-development. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. • The provision of a toolbox talk to contractors, by the Named Ecologist or an Accredited Agent, to inform them of the presence of bat roosts. • A pre-commencement inspection of any roost features by the Named Ecologist or an Accredited Agent using a torch and an endoscope (this may be via ladders, scaffolding or a mobile elevated platform). • The removal of bat roost features by hand under the supervision of the Named Ecologist or an Accredited Agent (where it is not possible conclude absence of bats during the pre-commencement inspection). • Avoiding the use of unnecessary lighting, particularly at night, or implementing a low impact lighting strategy to avoid illumination of retained or newly created roosts or roost features.	
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			- Avoiding excessive noise or vibration disturbance e.g. from power tools or radios, within close proximity of retained or newly created roosts or roost features. - Built in bat boxes will be installed within the new section of the building to provide compensation for the loss of the common pipistrelle day roost.	
Foraging bats	There is suitable foraging habitat on site and across the surrounding landscape.	No suitable bat foraging habitat will be removed as a result of the proposed works.	None.	N/A
Nesting birds	The buildings offer no opportunities for nesting birds.	None.	None.	The installation of bird boxes on retained buildings will provide additional nesting habitat for birds e.g. Schwegler No 17 Swift Nest Box Schwegler 1SP Sparrow Terrace Swift and sparrow boxes should be positioned at the eaves of a building and can be incorporated into the fabric of the building during construction.
Other ecological constraints	None identified.	N/A	N/A	N/A

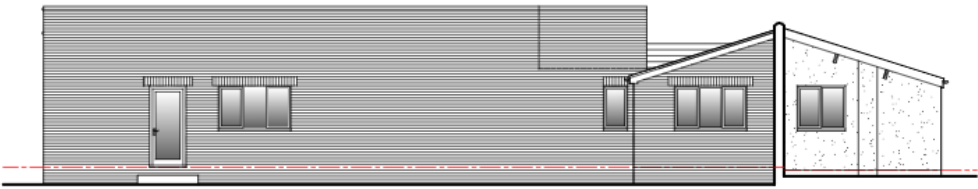
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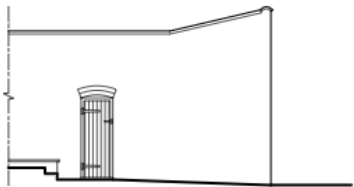
Appendix 1: Proposed Development Plan



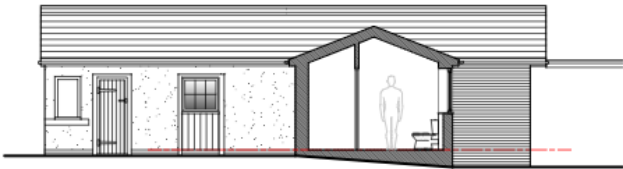
North elevation 1:100



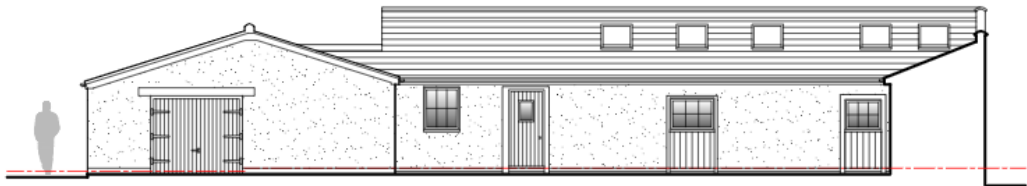
East elevation 1:100



South Entrance elevation 1:100



South elevation 1:100



West elevation 1:100

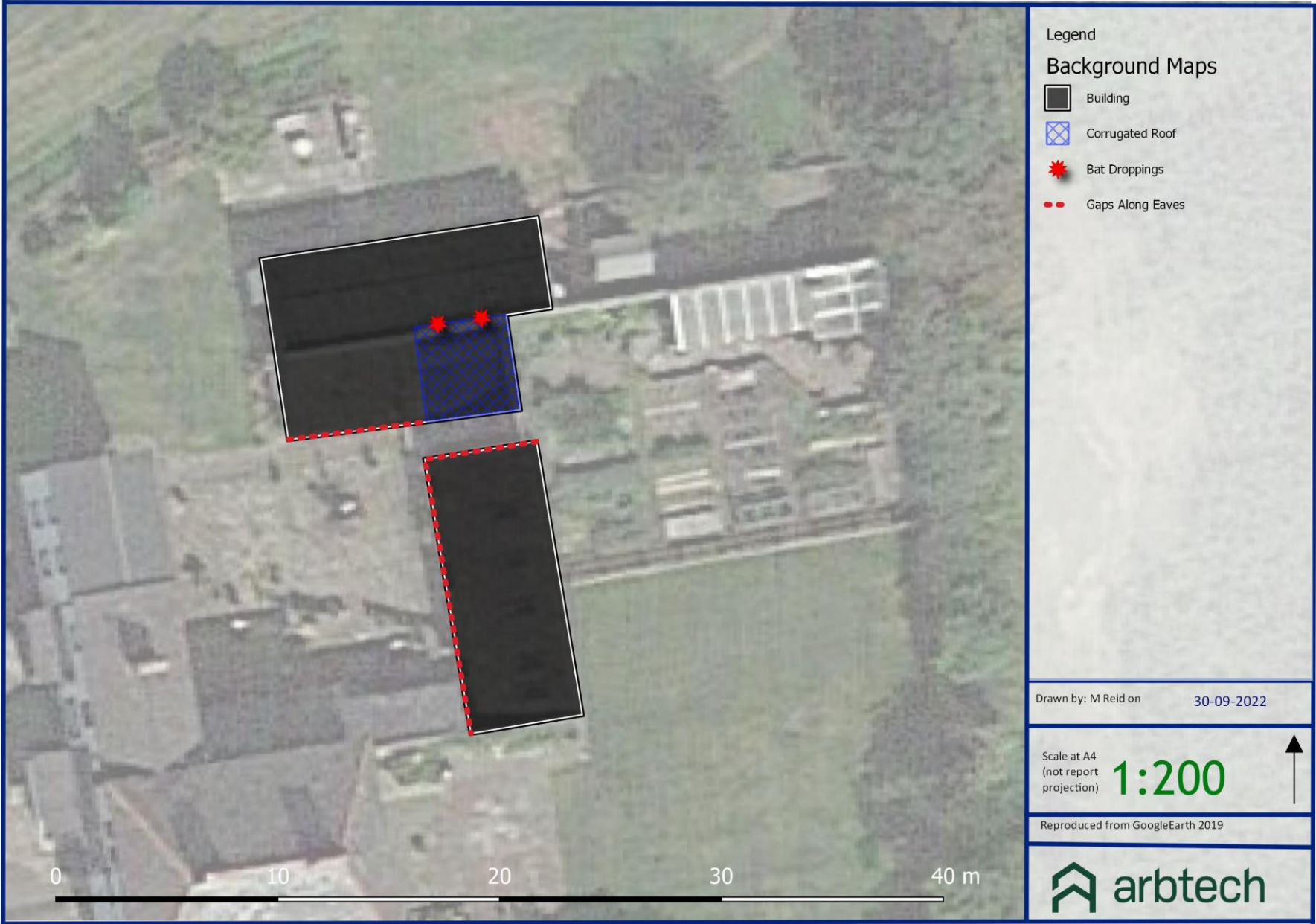
Proposed

 HDS Architectural Services, The Foundry, 15 Yoke Street, Wrexham, LL13 8UJ Tel: 01978 545550 www.hdsarchitectural.co.uk	
Project: Proposed Annex at Plas Eyton, Eyton, Wrexham, LL13 0YD	
Title: Proposed Elevations	Scale (A3): 1:100
Dwg No: 04P&A-P004	Date: 29.04.22
Revision:	

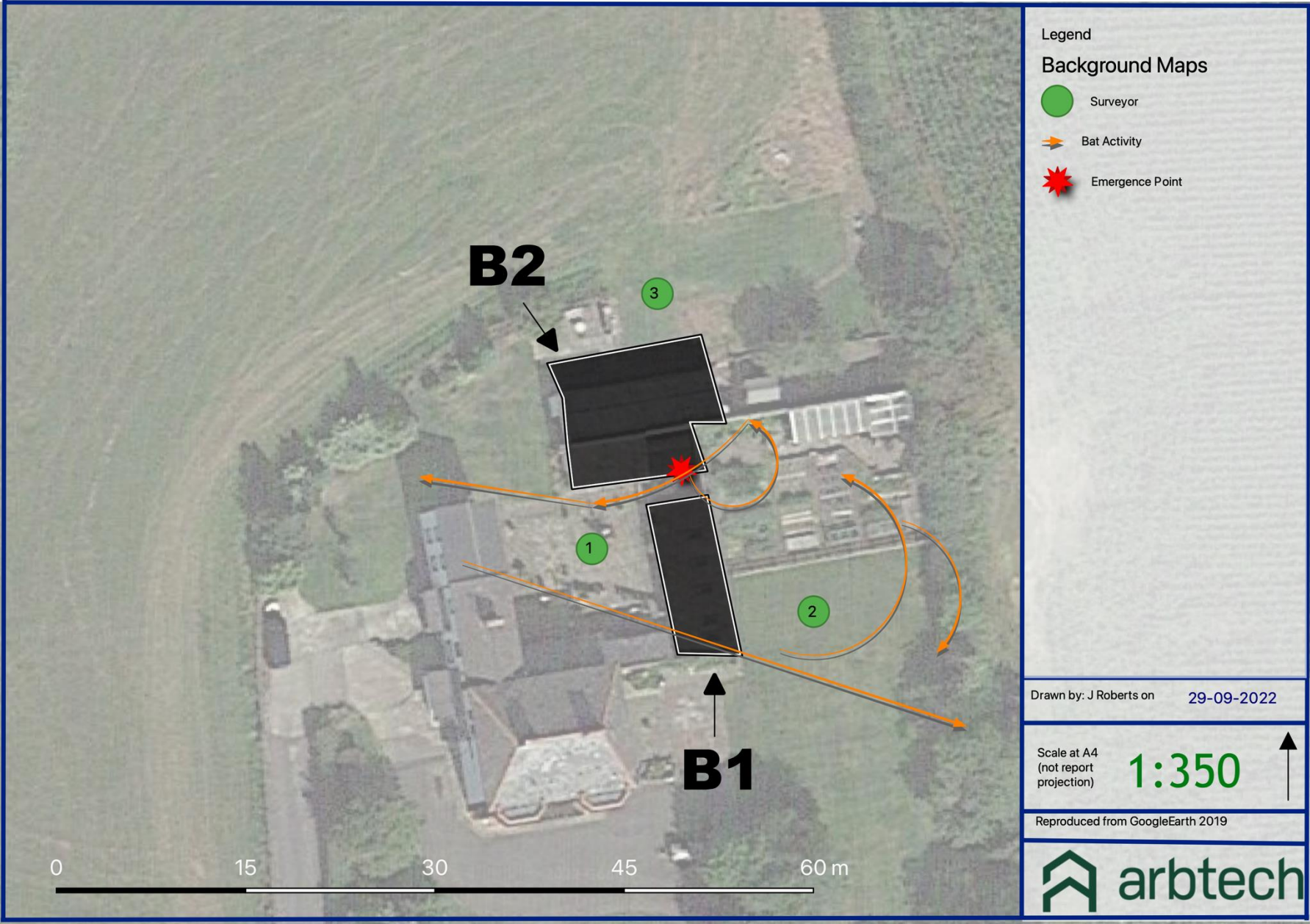
Appendix 2: Site Location Plan



Appendix 3: Bat Survey Plan (PRA)



Appendix 4: Bat Survey Plan (BERS)



Appendix 5: 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 (WALES)

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.

LOCAL PLANNING POLICY***Wrexham Unitary Development Plan (2005)***

The Wrexham Unitary Development Plan (2005) can be viewed here: <https://www.wrexham.gov.uk/sites/default/files/2020-05/udp-statement.pdf>

The following planning policies have implications for developers in relation to bats:

- Policy PS11 - Encouragement will be given to proposals which improve the biodiversity value of sites and to the establishment of local nature reserves where the nature conservation and landscape interest of the land will be protected and enhanced.
- Policy EC4 - Development proposals should provide for the conservation and management of hedgerows, trees, orchards, woodland, wildlife and other natural landscape and water features, and include new planting in order to enhance the character of the landscape and townscape. Development which results in the loss or significant damage to valuable trees, important hedgerows or ancient woodland sites will not be permitted.
- Policy EC6 - Development either within or close to sites of biodiversity interest will only be permitted where it can be clearly demonstrated that the need for the development outweighs the need to safeguard the intrinsic nature conservation value of the site. Where such development is permitted, damage should be kept to a minimum, and compensatory measures should be provided. Measures to improve the biodiversity value of sites and enhance their natural conservation interest and landscape quality including the establishment of local nature reserves, will be supported.

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 England and Natural England 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:

1. 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;
2. scientific and educational purposes;
3. ringing or marking; and,
4. conserving wild animals.

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