



Preliminary Roost Assessment

Caelica Farm Bungalow, Sarn, Malpas, Cheshire, SY14 7LW

Eleanor Ormrod / H&S Ormrod

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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 Eleanor Ormrod / H&S Ormrod to undertake a Preliminary Roost Assessment (PRA) at Caelica Farm Bungalow, Sarn, Malpas, Cheshire, SY14 7LW (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing prefabricated bungalow, B1, to be replaced with a 3 bedroomed detached brick house and a detached brick double garage (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 4 of this report.

Feature	Foreseen impacts	Recommendations <i>Measures required to adhere to guidance, legislation, and planning policies.</i>
Foraging and commuting bats: Hedgerows and scattered trees could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which is detailed in Table 4.
Nesting birds: The building 1 offers no opportunities for nesting birds.	None. However, there is some vegetation quite close to the building and some very light ivy coverage.	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Eleanor Ormrod / H&S Ormrod to undertake a Preliminary Roost Assessment (PRA) at Caelica Farm Bungalow, Sarn, Malpas, Cheshire, SY14 7LW (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing prefabricated bungalow, B1, to be replaced with a 3 bedroomed detached brick house and a detached brick double garage (hereafter referred to as “the proposed development”). 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).

No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author’s knowledge, by any other consultancy.

1.2 Site Context

The site is located at National Grid Reference SJ 43653 44240 and has an area of approximately 0.1ha comprising one residential bungalow, B1, amenity grass and hedgerow borders around the garden, with a small amount of hard standing access paths. It is surrounded by a small number of agricultural buildings, with arable and pastoral fields in the wider landscape, with surrounding hedgerows and scattered trees. The village of Tallarn Green is situated to the north-east with the Wych brook and vegetated banks running between the Welsh and English border. 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 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 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.

2.0 Methodology

2.1 Desk Study

The desk study included a 2km radius review of the magic.gov.uk database for statutory designated sites with bat qualifying interests. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

2.2 Field Survey

The survey was undertaken by Katy Perry BSc (Hons) MCIEEM, Senior Consultant (Natural England Bat Licence Number: 2022-10404-CL18-BAT and Accredited Agent on Natural Resources Wales Licence: S091515/1 and 161124) on 1st February 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 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 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 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
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 Limitations

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.

Specific limitations to the survey were a lack of access to the loft space of B1 due to health and safety reasons. The loft space was not boarded and a safe route for a full inspection could not be determined. The loft was inspected from the loft hatch as best as possible.

These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of desk study results is provided below.

3.2 Designated Sites

Details of any statutory designated sites with bat qualifying interests within a 2km radius of the site, 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 (approx.)	Reasons for notification from Natural Resources Wales
Well Rough and Long Plantation Site of Special Scientific Interest (SSSI)	1.5km north-west	This is one of the few woods in the Wych Brook valley that has not been modified by conifer planting. Most of the wood lies on steep slopes on the north banks of the Wych Brook and it includes the best example of a wet ash and field maple wood in Cheshire. The woodland could provide foraging and commuting routes for bats.

3.3 Landscape

A review of aerial photographs (Google Earth) the magic.gov.uk database and OS maps has been undertaken. Collated together, the value of the landscape for bats is described below:

The site is in a rural area, south of the village Tallarn Green, situated within arable and pastoral fields, south-west of the Wych brook and the Welsh and English border. The brook to the north-east has wooded, treelined banks and the arable and pastoral fields in the landscape have hedgerows and scattered trees, which could be used by bats for roosting, foraging, and commuting. Ancient woodland borders the brook and the country boundary, which could support roosting bats. The Wych brook will provide abundant insect foraging for bats.

There are two EPSLs returned within 2km of the site from Natural England, as the Welsh records are not available on MAGIC. The EPSLs were for the destruction of resting places for brown long-eared bats and soprano pipistrelles.

3.4 Field Survey Results

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 3.

Table 3: Weather conditions during the survey

Date: 01/02/2023	
Temperature	7°C
Humidity	59%
Cloud Cover	0%
Wind	0mph
Rain	None

B1 – southern elevation (pictured opposite).

B1 is a detached single storey prefabricated concrete residential bungalow, with a gabled roof clad in concrete roof tiles. The roof tiles are in very good condition with no raised tiles under which bats could roost.

The doors and windows are wooden framed and appear in excellent condition with no suitable bat roosting sites.

The walls of the building are concrete prefabricated sheets which interlock and have no gaps or cracks between that would allow ingress.

**B1 – eastern elevation (pictured opposite).**

The mortar under the end tiles on the gable end is secure with no missing sections and no means of access or ingress under the roof tiles on the ends of the roof.

There are wooden bargeboards, soffits, and fascia around the perimeter of the building which are in very good condition, with no visible gaps.

Both of the gable ends of the building have decorative hanging tiles as shown in the image opposite. These are in very good condition and lie flush to one another, shown in a close-up image below.



B1 – northern elevation (pictured opposite).

The rear of the property is in equally good condition with no gaps in the soffit and fascia, no gaps between the concrete panels for the walls and no means of ingress around the wooden framed windows.

The roof tiles, including the ridge tiles are in very good condition. The lead flashing around the chimney lies flush to the roof tiles with no means of ingress. The brickwork on the chimney is secure with no missing mortar.

**B1 – western elevation (pictured opposite).**

The hanging tiles on this elevation are in equally good condition to the opposite gable end.

As with the opposite gable end, there is no missing mortar underneath the roof tiles along the edge and no means of ingress into the building or roof space.



B1 – close up of wooden soffit and fascia (pictured opposite).

Around the perimeter of the building, the wooden soffit and fascia are in very good condition, lying flush to the concrete panels of the building with no gaps between or means of ingress.

On the south-eastern edge of the building, there is very light ivy coverage. This does not penetrate or enter the building and nor is it dense enough to currently support nesting birds.

**B1 – close up of the hanging tiles (pictured opposite)**

The eastern and western gable ends have decorative hanging tiles present. This image shows how well the tiles are fitted, lying flush to one another with no gaps underneath or crevices present that could support roosting bats.



B1 – interior (pictured opposite).

There is one loft space within the main roof void of B1. The roof structure is built from modern timber beams including the ridge beam. The roof is lined with bitumen felt which is in very good condition with no gaps or tears. The floor of the loft space is lined with mineral wool insulation and with no timber boards in place. There are cobwebs around the ridge beam and roof to floor cobwebs which could indicate a lack of internal flying activity from void dwelling bats, such as brown long-eared bats.

No daylight enters the loft space which indicates that it is well sealed. There is evidence of rat activity including rat droppings.

**B1 – interior (pictured opposite).**

The roll insulation was searched around the loft hatch for evidence of bats such as feeding remains, like moth and butterfly wings, and droppings but none were observed. The chimney is secure and there is no external light entering the loft space. The loft space appears secure.



B1 - evidence of bats

There was no evidence of bats observed within the loft space or the areas that could be searched.
There was no external evidence or features present to allow ingress.

The loft space has a large number of rat droppings shown opposite.

**B1 - breeding birds and other incidental observations**

There was no evidence of nesting birds located internally or externally on the survey building.
Only large numbers of bat droppings were observed within the loft space.



4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

A summary of the relevant legislation and planning policies is provided in Appendix 4.

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 Resources Wales. 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 Resources Wales.

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 4 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 demolition of the existing prefabricated bungalow, B1, to be replaced with a 3 bedroomed detached brick house and a detached brick double garage.

Table 4: 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 PPW (2021)</i>
Roosting bats (B1)	Building 1 has negligible value for roosting bats due to a lack of potential roost features.	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.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.	The installation of a minimum of two bat boxes on mature trees around the site boundaries or on newly constructed buildings will provide additional roosting habitat for bats e.g. 1FF Schwegler Bat Box (trees) Beaumaris Bat Box (buildings) Vivara Pro Woodstone Bat Box (buildings) 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.
Foraging and commuting bats	Hedgerows and scattered trees could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: • Planting of native tree, shrub, and hedgerows to increase foraging opportunities.

			• Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers, and shields. Lights will also be directional to ensure that light is directed to the intended areas only. • External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. • Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.	
Nesting birds (B1)	The building 1 offers no opportunities for nesting birds.	None. However, there is some vegetation quite close to the building and some very light ivy coverage.	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.	The installation of a minimum of two bird boxes on mature trees around the site boundaries or on newly constructed buildings will provide additional nesting habitat for birds e.g. Schwegler 1SP Sparrow Terrace (buildings) Woodstone Nest Box (buildings or trees) Or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain, and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk

				where foliage will not obscure the entrance hole. 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. The habitats immediately surrounding the building are hard standing and short amenity grass.	N/A	N/A	N/A

5.0 Bibliography

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PROJECT No.	A2152
PROJECT	Caelica Farm - Replacement Dwelling
ADDRESS	Caelica Farm Bungalow Sarn Malpas SY14 7LW

TITLE	Proposed Site Plan
DRAWING No.	PL02
REVISION	-
STATUS	Planning
SCALE	1:200 @ a3

REV No.	DESCRIPTION	DATE
REV No.	DESCRIPTION	DATE

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Appendix 2: Site Location Plan



Appendix 3: Bat Survey 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 (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 keyways 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 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.