



Preliminary Roost Assessment Survey

Manettes, 95-96 High Street, Merthyr Tydfil, CF47 8UP

MF Design and Build Ltd

Status	Issue	Name	Date
Draft	1	Chris Formaggia BSc (Joint Hons) CBiol CEnv FRSB VR, Head of Ecology	03/08/2021
Reviewed	1.1	Client Agent Review	26/08/2021
Draft	1.2		
Final	2	Chris Formaggia BSc (Joint Hons) CBiol CEnv FRSB VR, Head of Ecology	31/08/2021
Updated post further LPA comments	4	Chris Formaggia BSc (Joint Hons) CBiol CEnv FRSB VR, Head of Ecology	21/04/2022

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Executive summary

Arbtech Consulting Limited was commissioned by MF Design and Build Ltd to undertake a Preliminary Roost Assessment (PRA) of a former ladies' fashion retail unit in Merthyr High Street. The survey was undertaken on the 20th July 2021 and COVID-19 precautions were applied when entering properties. The aim of the assessment was to consider the value and suitability of the structure for roosting bats. 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.

The development proposals are for the conversion of the upper floors into one-bed apartments.

Recommendations - This is work you will need to commission (if any) to obtain planning permission and comply with legislation

Ref	Survey assessment (with conclusions justification)	Foreseen impacts	Recommendations	Enhancements
B1	No live (or dead) bats were found within the building. No secondary evidence of bat usage was found internally or any of the external surfaces of the building. The building is assessed as having low bat roosting potential.	No impacts foreseen.	Despite a negative PRA the building benefitted from a full suite BERS survey which had already been commissioned to evaluate the neighbouring property – Barcode at 92-94 High Street – and this property. Access for this physical survey was organised after the BERS suite was completed.	The Local Planning Authority has a duty to ask for enhancements under the NPPF (July 2018) The proposed refurbishment/conversion can re-create roof architecture that is a beneficial environment for roosting bats. It is recommended that further enhancement could be the external mounting of 3# FSC triple cavity boxes at the rear of this property. A further 3~units have been recommended for the neighbouring Barcode.
B1 Birds	Some evidence of use by pigeons in the past – guano present.	Nesting birds do not appear to be utilising the building in its current condition	No further surveys required. LPA is likely to use standard breeding bird planning conditions to prevent any contravention of the Wildlife and Countryside Act 1981 (as amended).	Not proposed.

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1.0 Introduction and Context

1.1 Background

Arbtech were commissioned by MF Design and Build Ltd Ltd to undertake a Preliminary Roost Assessment (PRA) of a former fashion shop in Merthyr. The shop is in the town centre and occupies 95-96 on the High Street. The survey was undertaken on the 20th July 2021 and COVID-19 precautions were applied when entering properties. The assessment is informed by the Bat Conservation Trust publication, *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).

No previous reports have been produced for this site by Arbtech at this location but the neighbouring Barcode was put through a PRA in April 2021 and an arrangement had already been formulated to evaluate both properties by a suite of bat emergence and re-entrance surveys (BERS).

1.2 Site Context

The site is located at National Grid Reference SO 04949 06383 and the building has an area of approximately 215 square metres. The whole of the building was surveyed. The building has been partially cleared internally but has stored materials on both floors.

1.3 Scope of the report

This report provides a description of all features suitable for roosting 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 constraints to the proposals as a result of roosting 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.

The aim of the assessment was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how they could use the site. 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 where possible.
- An outline of likely impacts on any known roosts has been provided, based on current development proposals.
- Recommendations for further survey and assessment have been made, along with advice on the requirements of a European Protected Species Mitigation Licence (EPSML) application if appropriate.

A survey plan is presented in Appendix 1, proposed plans in Appendix 2, desk study results in Appendix 3 and a summary of relevant legislation is presented in Appendix 4.

1.4 Project Description

The development proposals are for the conversion of the building into residential town apartments.

2.0 Methodology

2.1 Desk Study methodology

The desk study included a 2km radius review of statutory and non-statutory designated sites and Biodiversity Action Plan (BAP) Priority Habitats. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

The immediate locale is urban and has a relatively low value as a batscape. There is unfettered access to the rear of the property to the wooded Nant Morlais corridor that could serve as a bat commute to other habitat areas.

2.2 Site Survey methodology

The survey was undertaken by Christopher Formaggia (NRW bat licence number NRW BAT – S088475/1 EXP 31/08/2022) who has 32 years of experience as a professional ecologist and bat surveyor. He was assisted by Ecology Intern Megan James. A total of 0.5 FTE of survey effort was expended on the PRA.

All features that will be impacted by the project proposals were assessed for their bat roosting and/or commuting habitat. The surveyor systematically surveyed all features suitable for-bats and signs of bat activity.

For any surveyed buildings:

A non-intrusive visual appraisal from the ground using binoculars, inspecting the external features of the building(s) for potential access/egress points, and for signs of bat use. An internal inspection of the building was also made, including the living areas of derelict or abandoned buildings and the accessible roof spaces of all buildings, using an endoscope, 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.

For any surveyed trees:

A visual inspection from ground level using binoculars and where accessible and safe to do so, an internal inspection of potential roosting features using an endoscope, torch and ladders.

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

All affected survey features on site were categorised according to the likelihood of bats being present, in line with best practice guidelines (Collins, J. (ed) 2016). The features that dictate the likelihood of roosting bats are summarised in Tables 1 and 2 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

Likelihood of bats being present	Feature of building and its context
Higher	Buildings/structures with features of particular significance for 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).
Lower	A small number of possible roost sites/features, used sporadically by more widespread species. 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.

Table 2: Features of a tree that are correlated with use by bats

Likelihood of bats being present	Feature of tree and its context
Higher	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Lower	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.

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, and the known distribution of bats as recovered during the desk study.

There were no specific limitations to the survey regarding internal access, exterior visibility, safety from biotic (e.g. wasps) or abiotic (e.g. asbestos) sources or adverse weather. Small areas of the flat-roof structure had been exposed internally and these aided assessment of the roof-structure but the whole of the sub-space could not be inspected.

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of desk study results is provided below, full details are presented in Appendix 3.

3.2 Designated sites

Details of any statutory and non-statutory designated sites within a 2km radius of the survey site, including their reasons for notification, are provided in Table 3 below.

Table 3: Designated sites within 2km radius of the site

Sites of Special Scientific Interest (Wales)	
Name	CWM GLO A GLYNDYRYS
Eastings	303786
Northings	205227
First Notified	23/01/2003
Last Notified	17/07/2008
Confirmation Date	08/04/2009
Cartesian Area (Ha)	181.310227
Name	CWM TAF FECHAN WOODLANDS
Eastings	303945
Northings	208684
First Notified	01/01/1972
Last Notified	09/12/1985
Confirmation Date	Null
Cartesian Area (Ha)	64.13199

Designated Name	Site	Distance from Site (approx.)	Reasons for Notification from Natural Resources Wales and/or BRD or LPA policy maps
Statutory Sites			
Two	~1km to Cwm Glo and ~1.7km to Cwm Taf	- Cwm Glo a Glyndyrys is of special interest for its extensive areas of marshy grassland, species-rich neutral grassland and acid grassland, and for the association of these habitats with others including woodland and heath. It is also of special interest for its outstandingly diverse assemblage of grassland fungi, including 32 species of waxcap <i>Hygrocybe</i> spp, making it one of the best sites in Britain - Where the partially wooded valley of the Taf Fechan crosses the north crop Carboniferous Limestone. Mixed deciduous woodlands cover steep slopes and spoil from quarries with one of the few Glamorgan stations for <i>Gymnocarpium robertianum</i>. There are interesting plant communities in flushes around tufa springs and luxuriant growths of bryophytes in the splash zone of the river.	
Non-statutory Sites			
The LPA Ecologist has confirmed the Afon Taf SINC at 285m from site (and the presence of a Buglife B-Lines Area).		<i>A SEWBRc data search was obtained from SEWBRc for a radius of 2km - LERC reference (0212-728)</i>	

3.3 Landscape

A review of the designated sites, aerial photographs (Figure 1), the Magic database and OS maps has been undertaken. Collated together, the site's local bat habitat is described below:

The main settlement of Merthyr Tydfil has been described as the most significant Welsh town of the Industrial Revolution and probably the largest iron-making town in the world in existence in the early to mid-19th century and the area still retains its industrial landscape character.

The "batscape" is low, urban and street-illuminated. There is unfettered access for bats to the Nant Morlais riparian corridor and connection to better habitat blocks beyond.



Figure 1: Aerial photo of site, showing landscape structure

3.4 Historical records

A SEWBRc data search was commissioned to support the application - LERC reference (0212-728)

3.5 Field Survey Results

One building on site was surveyed, designated as Class E under new planning designation and illustrated in the map in Appendix 1. The weather conditions recorded at the time of the survey are shown in Table 7.

Table 7: Weather conditions during the survey

Date: 20/07/2021	
Temperature	27°C
Humidity	58%
Cloud Cover	0%
Wind	8mph from west
Rain	None

3.6 Site Feature descriptions and photos

B1 Exterior

The photo shows both Manettes (left) and Barcode on their High Street frontages.

The building is of simple block construction with sealed windows to front and roller shop windows.

The masonry presents no opportunity for crevice-dwelling bats – minor defects in the masonry are too superficial to support crevice dwelling bats.

The flat roof is simple and is a construction type that is unlikely to be favoured by bats.



Inserts shows rear of property and its subservient connection to the larger Barcode building.



Class E– Upper Floor. The upper floor consists of a main void and some smaller store/changing rooms and toilets. It is largely empty.

No live (or dead) bats present.

No field signs of bats present – droppings, prey discards, fur stains, urine stains or characteristic parasites.



B1 – the flat roof was exposed in places and its simple structure is unlikely to be favoured by bats.



B1 – lower floor

The shop floor has been partially stripped out and is currently filled with stored building materials.

No live (or dead) bats present.

No field signs of bats present – droppings, prey discards, fur stains, urine stains or characteristic parasites.

It is unclear whether bats could have had unfettered access to the building but it is considered likely that since sections of the roof were revealed that there could be possible ingress/egress into the whole of the structure.



4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

Bats are protected under the Wildlife and Countryside Act and Conservation Regulations (see Appendix 4 for a summary of legislation protecting bats in the UK). 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.

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 a European Protected Species Mitigation Licence (EPSML) application with 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 (Collins, J. 2016).

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/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 (Collins, J. 2016). 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 EPSML 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.

4.2 Evaluation

Taking the desk-based assessment and site survey results into account, the following value for roosting bats has been placed on each site survey feature.

Table 8: Evaluation of building on site

Ref	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (July 2018)
B1	No live (or dead) bats were found within the building. No secondary evidence of bat usage was found internally or any of the external surfaces of the building. The building is assessed as having low bat roosting potential.	No impacts foreseen.	Despite a negative PRA the building benefitted from a full suite BERS survey which had already been commissioned to evaluate the neighbouring property – Barcode at 92-94 High Street.	The proposed refurbishment/conversion can re-create roof architecture that is a beneficial environment for roosting bats. It is recommended that further enhancement could be the external mounting of 3# FSC triple cavity boxes.
B1 Birds	Some evidence of use by pigeons in the past – guano present.	Nesting birds do not appear to be utilising the building in its current condition	No further surveys required. LPA is likely to use standard breeding bird planning conditions to prevent any contravention of the Wildlife and Countryside Act 1981 (as amended).	Not proposed.

If, after BERS, it is assessed that functional roosts are present then the works will need to proceed under a Conservation Regulations licence that will have to be sought from Natural Resources Wales (NRW). This licence will be necessary as the conversion work would otherwise be unlawful. It can only be sought after full planning resolution.

It is, at this stage, considered that a viable mitigation/compensation plan can be found that would make the granting of such a licence likely.

5.0 Bibliography

- British Trust for Ornithology (2016) www.bto.org/about-birds/nbnw/putting-up-a-nest-box
- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London.
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Google Earth (2018) accessed on 03/08/2021
- Magic database (2018) <http://www.magic.gov.uk/MagicMap.aspx> accessed on 09/12/2020
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Appendix 1: Survey Plan



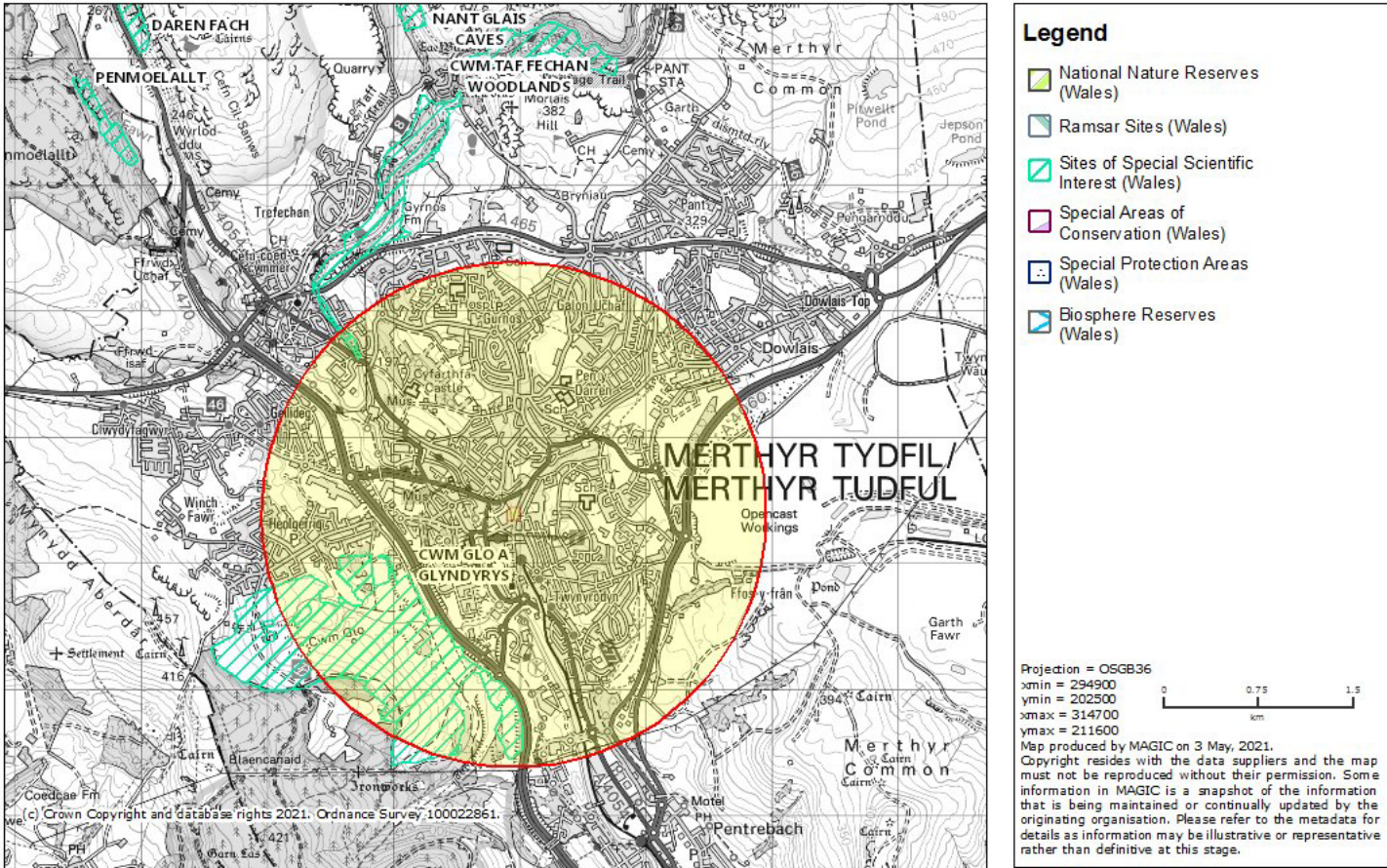
Appendix 2: Proposed Site Plan

As per application bundle

Appendix 3: Desk Study Information

MAGiC

Manettes – Designated Sites



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* 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.

All species of bats are also protected under the *Wildlife and Countryside Act 1981 (as amended)* through their inclusion on *Schedule 5* (which applies to England and Wales). 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

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 42 of the Act requires The National Assembly for Wales must, as respects Wales, publish a list of the living organisms and types of habitat which in the Assembly's opinion are of principal importance for the purpose of conserving biodiversity. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act.

Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

Environment (Wales) Act 2016 and the Biodiversity Duty

The Environment (Wales) Act 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)

The document refers to Biodiversity and Ecological Networks and states:

Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity. In doing so planning authorities must also take account of and promote the resilience of ecosystems, in particular the following aspects:

- diversity between and within ecosystems;
- the connections between and within ecosystems;
- the scale of ecosystems;
- the condition of ecosystems including their structure and functioning; and
- the adaptability of ecosystems.

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.

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;
- 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: this is more complex to address, not least because of the interactions of various factors which underpin habitats. At the very least planning approaches 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 through the planning system; and
- Connectivity: to take opportunities to develop functional habitat and ecological networks across landscapes, building on existing connectivity and quality and encouraging habitat creation and restoration. 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.

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 on development works:

A European Protected Species Mitigation (EPSM) Licence 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 12 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:

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
4. conserving wild animals

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

