



Preliminary Roost Assessment and Bat Emergence and Re-entry Surveys

31 High Street, Wrexham LL13 8HY

James Olivier

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Executive summary

Arbtech were commissioned by James Olivier to undertake a Preliminary Roost Assessment (PRA) and Bat Emergence and Re-entry Surveys at 31 High Street, Wrexham LL13 8HY. The surveys were completed on 29/07/2019. The aim of the assessment was to consider the value and suitability of the structures for roosting bats and to confirm the presence/likely-absence of a bat roost. When bat roosts are identified this includes providing evidence for species, numbers and levels of activity, to identify any entrance and egress points, and to gain an understanding of the activity of bats using the site in the local landscape. 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 refurbishment of ground floor office and change of upper floors to 6 no. flats. A planning application is being prepared for submission to Wrexham County Borough Council.

Recommendations

No bats were seen emerging from or re-entering the building during the surveys, and there was generally a very low level of bat activity in the area. Consequently, the probability that bats are using building B1 is extremely low. The development can proceed as there is an acceptably low risk to bats.

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1.0 Introduction and Context

1.1 Background

Arbtech were commissioned by Neil Moir to undertake a preliminary roost assessment (PRA) and bat emergence and re-entry surveys at 31 High Street, Wrexham LL13 8HY. The surveys were completed on 29/07/2019. 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.

1.2 Site Context

The site is located at National Grid Reference SJ 33567 50205 and has an area of approximately 0.1ha. There is one building within the site boundaries, which was surveyed as this will be affected by the proposed development.

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. This report also provides a description of the bat activity observed and recorded during the survey. The aim of the assessment was 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.

Information is provided regarding any constraints to the proposals as a result of roosting bats, and summarises any mitigation required to achieve planning permission and statutory consent to comply with wildlife legislation.

To achieve the aims of the assessment, the following steps have been taken:

- A desk study has been carried out including a request for information from the local bat group or records centre.
- 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.

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 refurbishment of ground floor office and change of upper floors to six flats. A planning application is being prepared for submission to Wrexham County Borough Council.

2.0 Methodology

2.1 Desk Study methodology

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

Existing bat records relating to the site and a surrounding 2km radius are required to conform to national guidelines. The data search is confidential information that is not suitable for public release and has been analysed and summarised for presentation in this report.

2.2 Site Survey methodology – Preliminary Roost Assessment

The Preliminary Roost Assessment element of the survey was undertaken by Mel Reid (Accredited Agent to Natural Resource Wales Bat Licence Number: 79422:OTH:CSAC:2018 from 24/04/2019) on 29/07/2019.

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 Site Survey methodology – Emergence and Activity Surveys

The lead surveyor is Mel Reid (Accredited Agent Natural Resource Wales Bat Licence Number: 79422:OTH:CSAC:2018 from 24/04/2019) and was assisted by experienced surveyors with several years of bat survey experience. Two surveyors were used to provide sufficient cover of the building during the survey. The designated position of each surveyor during each survey is detailed in the tables in Section 3.9 below and shown on the plan in Appendix 1.

The surveys involved surveyors positioned around the building ensuring that all elevations and roof sections with suitable roosting features could be clearly observed. Particular attention was paid to the areas of the building identified as providing suitable access points to bat roosts. The location of each surveyor during each survey is shown in Appendix 1. Each surveyor was assigned an area of the building to observe for the duration of the survey. Surveyors used Heterodyne and Frequency Division bat detectors, and Wildlife Acoustics EM3+ and Echo Meter Touch detectors connected to iPads. Bat echolocation calls recorded during the surveys were analysed using Wildlife Acoustics sound analysis software Kaleidoscope V3.1.7 when required.

That is, the Echo Meter Touch includes an Auto ID 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.

In accordance with the latest bat survey guidelines (Collins, J. 2016) 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, as these adverse weather conditions can impact upon bat emergence and foraging behaviour.

2.4 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*.

2.5 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.

2.6 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. These surveys follow best practice guidance to assess the habitat suitability of the building on site and to confirm presence/likely-absence of roosting bats. Where present, roost have been characterised. 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.

Specific limitations to the preliminary roost assessment were a lack of access to the loft space of B1 which had been sealed. A false ceiling was present across the entire roof structure preventing access into the loft space.

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 1km radius of the survey site, including their reasons for notification, are provided in the table below.

Table 3: Designated sites within 1km radius of the site

Designated Name	Site	Distance from Site (approx.)	Reasons for Notification from Natural Resources Wales and/or BRD or LPA policy maps
Statutory Sites			
Sontley Marsh Sites of Special Scientific Interest (SSSI)		1900m south	The marsh lies in the flood plain of the river Stour. The soils, derived from alluvium, are base rich and organic and because of impeded drainage remain wet for most of the year. The site contains a number of wetland habitats i) damp grassland, with abundant tufted hair-grass <i>Deschampsia cespitosa</i> and marsh foxtail <i>Alopecurus geniculatus</i> ii) tall fen dominated by meadowsweet <i>Filipendula ulmaria</i> with abundant lesser pond-sedge <i>Carex acutiformis</i> and marsh horsetail <i>Equisetum palustre</i> ; iii) tall rank vegetation on the river bank with abundant comfrey <i>Symphytum officinale</i> and iv) small areas of carr woodland dominated by common alder <i>Alnus glutinosa</i> and crack willow <i>Salix fragilis</i> . Scattered patches of scrub occur throughout the site composed of a variety of species including osier <i>Salix viminalis</i> , blackthorn <i>Prunus spinosa</i> and guelder rose <i>Viburnum opulus</i> . Within the site there are a number of plants which are becoming less common in the county as more land is drained. These include narrow-leaved water parsnip <i>Berula erecta</i> , southern marsh orchid <i>Dactylorhiza praetermissa</i> , hemp agrimony <i>Eupatorium cannabinum</i> and great water dock <i>Rumex hydrolapathum</i> . A number of birds such as the reed bunting <i>Emberiza schoeniclus</i> and the sedge warbler <i>Acrocephalus schoenobaenus</i> breed on the site. The site is also important for insects. These include dragonflies such as brown aeshna <i>Aeshna grandis</i> an uncommon species in the county.
Gatewen Marsh SSSI		1900m north-west	Gatewen March is one of the three major examples in Clwyd of the type of wetland known as 'land' southern mesotrophic mud ', a type more typical of south-west Wales and a North Wales is confined mainly to Anglesey and Dwyfor. The site lies on the flat valley floor of a tributary of the River Gwenfro, and the stream runs through the eastern part of the marsh. The old Gatewen colliery tips are found along the head northern marsh. After the colliery closed, the land level was reduced as a result of the mining is a major factor in creating suitable conditions for the development of wetland vegetation. It is uncommon bog as there are large stands of Cat's tail <i>Typha latifolia</i> growing in shallow water along with Veronica-bccabunga <i>Gorferini</i> , <i>Alisma plantago-aquatica</i> water plantain and the essential elm of <i>Carex rostrata</i> . Along the edges of this growth, there are cars stands of Marsh Spruce <i>Eleocharis palustris</i> , together with Mentha's Water Mint <i>aguatica</i> , Gypsy Court <i>Lycopus europaeus</i> , Greater-leaved Otter <i>Berula erecta</i> and Lawn small <i>Ranunculus flammula</i> . to the north, there are clusters of Carex-guided Sessile Ash <i>riparia</i> and Prawns <i>Sparganium erectum</i> . Along the periphery, there are Plover <i>Phalaris arundinacea</i> and in the open channels pondweed broad-leaved <i>Potamogeton natans</i> . Willow <i>Salix</i> spp established part of the site, Willow per <i>Epilobium hirsutum</i> which is dominant in the area adjacent to the coal tips. He suggests This has caused the land to be disturbed in the past.
Non-statutory Sites			
None known			

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 site is situated in central Wrexham. The landscape is dominated by residential dwellings and shopping parks. There are small, scattered woodland copses and tree lines around the area, which could be used for foraging and commuting. Bellevue Park lies approximately 460m west of the site, which comprises an area of open grassland and woodland. This will provide suitable foraging habitat for bats. There is a large shopping parks adjacent to the site which will contain high levels of light and traffic.

Priority habitats within 1km of the site are listed in the table below.

Table 4: Priority Habitat Inventory within 1km (Magic.gov.uk):

Habitat	Closest distance from site
National Forest Inventory	~610m west



Figure 1: Aerial photo of site, showing landscape structure

3.4 Historical records

Existing bat records relating to the site and a surrounding 2km radius are required to conform to national guidelines. The data search is confidential information that is not suitable for public release. The client has been advised that biological records data for the local area is necessary to facilitate a complete assessment. To date Arbtech has not been authorised to purchase these records from Cofnod - North Wales Environmental Information Service. The Local Planning Authority (LPA) may request that bat records data are obtained to conform to national guidelines, and these can be incorporated into the report at a later date.

Table 5: Historical records* of bats within 2km of the site

Common name	Scientific binomial	Number of records	Number of roost records	Maternity roost records
Not instructed at this stage.				

*Records from the past 10 years

A search of the Magic database for granted European protected species mitigation licences (EPSMLs) for bats within a 1km radius of the site has been completed. Displaced bats from recently destroyed bat roosts >1km away from the survey site will find alternative roosting sites either within the mitigation measures implemented as part of the licence or will relocate to other known roost sites in close proximity to the Licenced site. 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 1km 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 Field Survey Results – Preliminary Roost Assessment

One building on site was surveyed, designated as B1 and illustrated in the map in Appendix 1. The weather conditions recorded at the time of the survey are shown in the table below.

Table 7: Weather conditions during the survey

Date: 29/07/2019	
Temperature	20°C
Relative Humidity	56%
Cloud Cover	100%
Wind	1mph
Rain	None

3.6 Site Feature descriptions and photos

B1 Exterior

B1 – northern elevation (pictured opposite).

B1 is a three-storey terraced style building. The building is brick-built, with quoin blocks along the building corners and a string course between the second and third floors. The windows and doors are wooden-framed and are tightly-sealed with no gaps suitable for roosting bats. The roof structure could not be observed from this elevation of B1.



B1 – southern elevation (pictured opposite).

There is a flat roof section on the southern elevation of B1. This flat roof section has a bitumen felt lining, and therefore lacks potential bat roosting features. There is a chimney on this flat roof section, as well as on the main roof pitch of B1. The lead flashing around the bases of these chimneys is in good condition with no gaps suitable for roosting bats.



B1 – southern elevation (pictured opposite).

The photo opposite shows a close-up of the roof structure on the southern elevation of B1. The roof is in a generally good condition with only one gap (circled in red) that could be utilised by crevice-dwelling bats.



B1 Interior

B1 – Loft space (pictured opposite).

There is a false ceiling covering the whole of the upper floor ceiling, preventing access into the loft space.

The photo opposite shows one gaps in the false roof, showing through to the loft space.



3.7 Preliminary Roost Assessment Recommendations

This Preliminary Roost Assessment Survey identified the following survey requirements for the site in line with best practice:

Table 8: Recommended surveys

Ref	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations
B1 Bats	The building has low habitat value for supporting roosting bats. There are minor suitable roosting features externally that could be used by low numbers of common crevice dwelling bat species. There is extremely limited connectivity to foraging areas in the wider landscape.	As the proposals include the conversion of this building, any bat roosts present would be disturbed. This could result in death or injury or disturbance of bats.	One bat emergence/re-entry survey is required during the active bat season (May – September) to confirm presence/likely-absence of a bat roost in the building. The survey must be completed during the optimal survey period mid-May to August inclusive. The survey can be either a dusk emergence or dawn re-entry survey. Two surveyors are required to provide full coverage of the building.

3.8 Field Survey Results – Bat Emergence and Activity Surveys

One building on site were surveyed as this was assessed to provide suitable roosting habitat for bats and evidence of a bat roost was located during the Preliminary Roost Assessment. This building is designated as B1 and illustrated in the map in Appendix 1.

The results of the survey are provided in the table below.

Table 9: Survey results

Date		29/07/219
Start and End Times		20:50 – 22:40 Sunset: 21:08
Weather Conditions		Start: Temp: 19°C Relative Humidity: 69% Cloud Cover: 70% Wind: 4mph Rain: None End: Temp: 18°C Relative Humidity: 75% Cloud Cover: 100% Wind: 3mph Rain: None
Surveyor (position) As shown in Appendix 1		Mel Reid - accredited agent to Natural England Bat Licence Number: 2016-22119-CLS-CLS (Position 1 – observing the east and south elevations and roof structure of B1) Jonathon Roberts – 1 year of experience conducting these types of surveys (Position 2 – observing the south elevation and roof structure of B1)
Building Reference	Surveyor Position	Notes/observations:
B1	1	There was a distant pass by a common pipistrelle recorded at 22:08, which was heard on the detector but not seen. No further bat activity was recorded during the survey.
B1	2	No bat activity was recorded during the survey.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

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

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

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

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

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

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

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

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

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

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

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

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

The surveys undertaken to date in and around B1 provide sufficient information to inform a planning application. A European Protected Species Mitigation Licence (EPSML) **will not be required** to enable the proposed works to be lawfully undertaken. Appropriate justification for this assessment is provided in Section 3 of this report.

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 12: Evaluation of the building on site

Ref	Survey conclusions	Foreseen impacts	Recommendations / Mitigation	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (July 2018)
B1	No bats were seen emerging from or re-entering the building during the surveys, and there was generally a very low level of bat activity in the area. Consequently, the probability that bats are using building B1 is extremely low. The development can proceed as there is an acceptably low risk to bats.	Bats are very unlikely to be roosting within B1 and as such, there are not anticipated to be any impacts on bats as a result of the proposed works.	In the unlikely event that bats are unexpectedly found during any stage of the development, work should stop immediately, and a suitably qualified ecologist should be contacted to seek further advice.	The developed site can be enhanced for the bat species observed to be foraging and commuting across the site during the surveys by installing of a minimum of two bat boxes on retained buildings e.g. Schwegler 2F Bat Box Schwegler 1FF Bat Box Schwegler 2FN Bat Box Improved Cavity Bat Box Bat boxes should be positioned 3-5m above ground level facing south or south-westerly with a clear flight path to and from the entrance. Bat boxes should also be positioned away from any artificial light sources.

5.0 Bibliography

- British Trust for Ornithology (2016) www.bto.org/about-birds/nnbw/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 (2019) accessed on 30/07/2019.
- Magic database (2019) <http://www.magic.gov.uk/MagicMap.aspx> accessed on 30/07/2019.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Appendix 1a: Survey Plan – Preliminary Roost Assessment



Appendix 1b: Survey Plan – Bat Emergence and Activity Surveys

No activity

Appendix 2: Proposed Site Plan

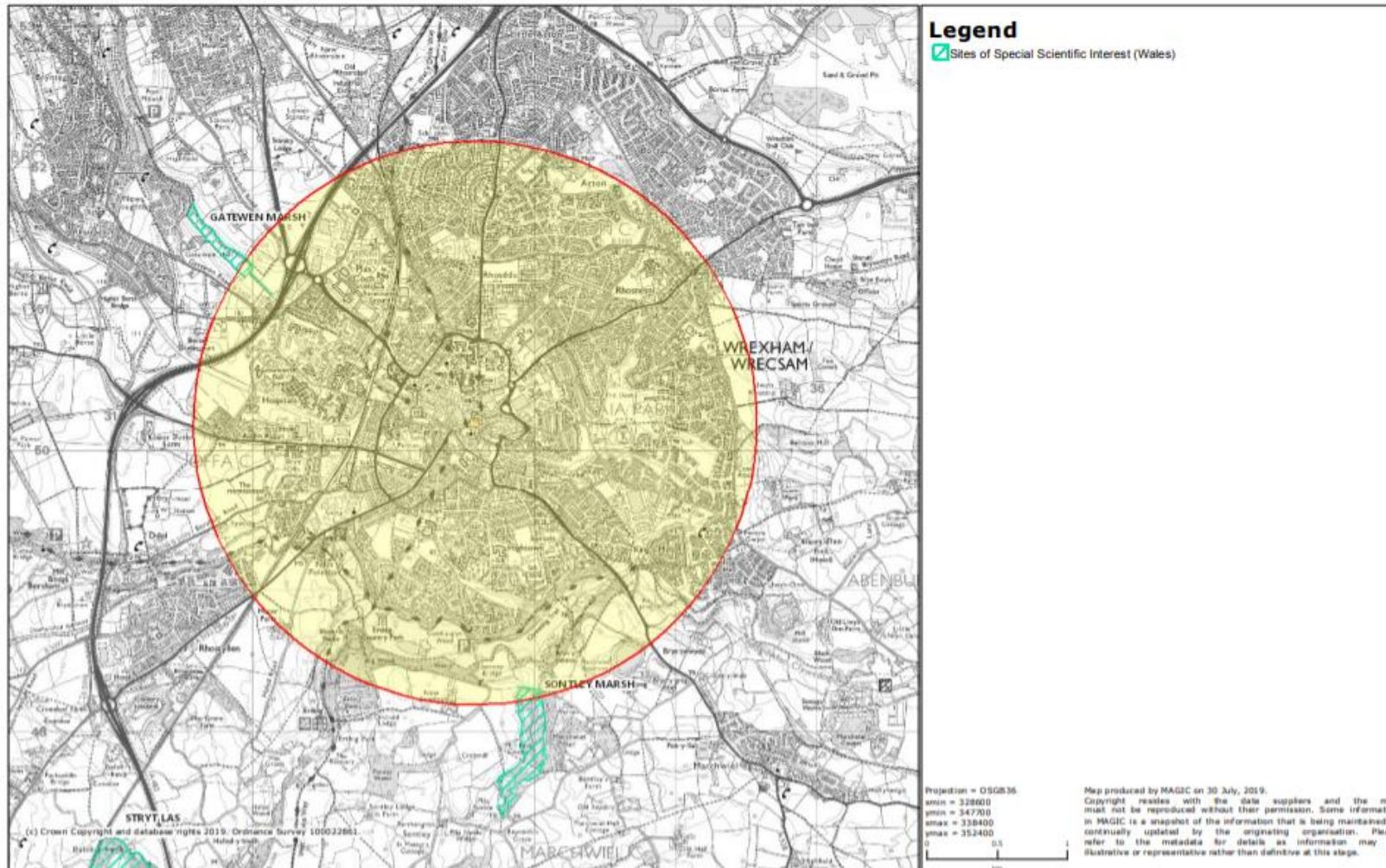


Appendix 3: Desk Study Information

Full historical records can be provided on request.

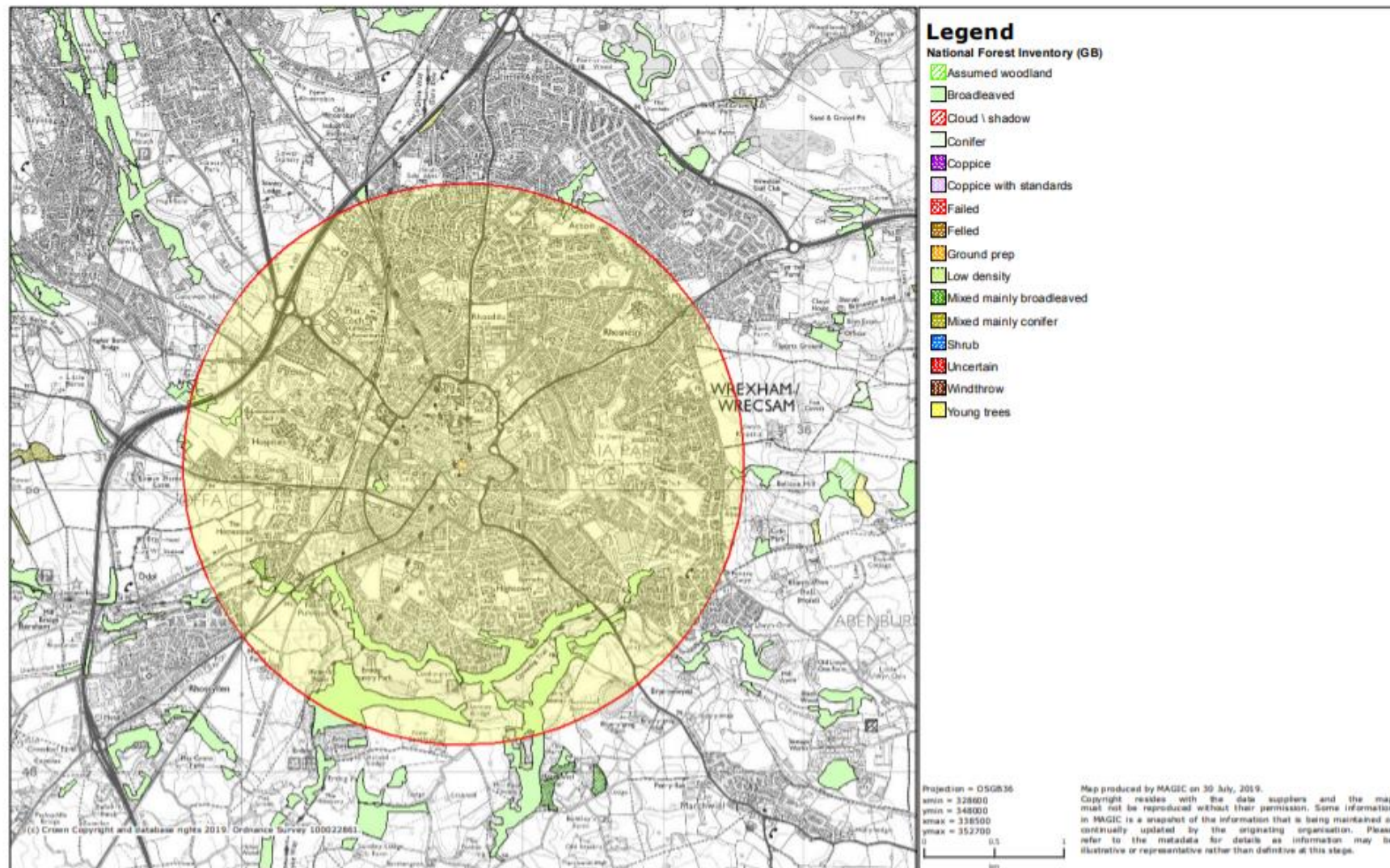
MAGiC

Designated Sites within a 2km Radius



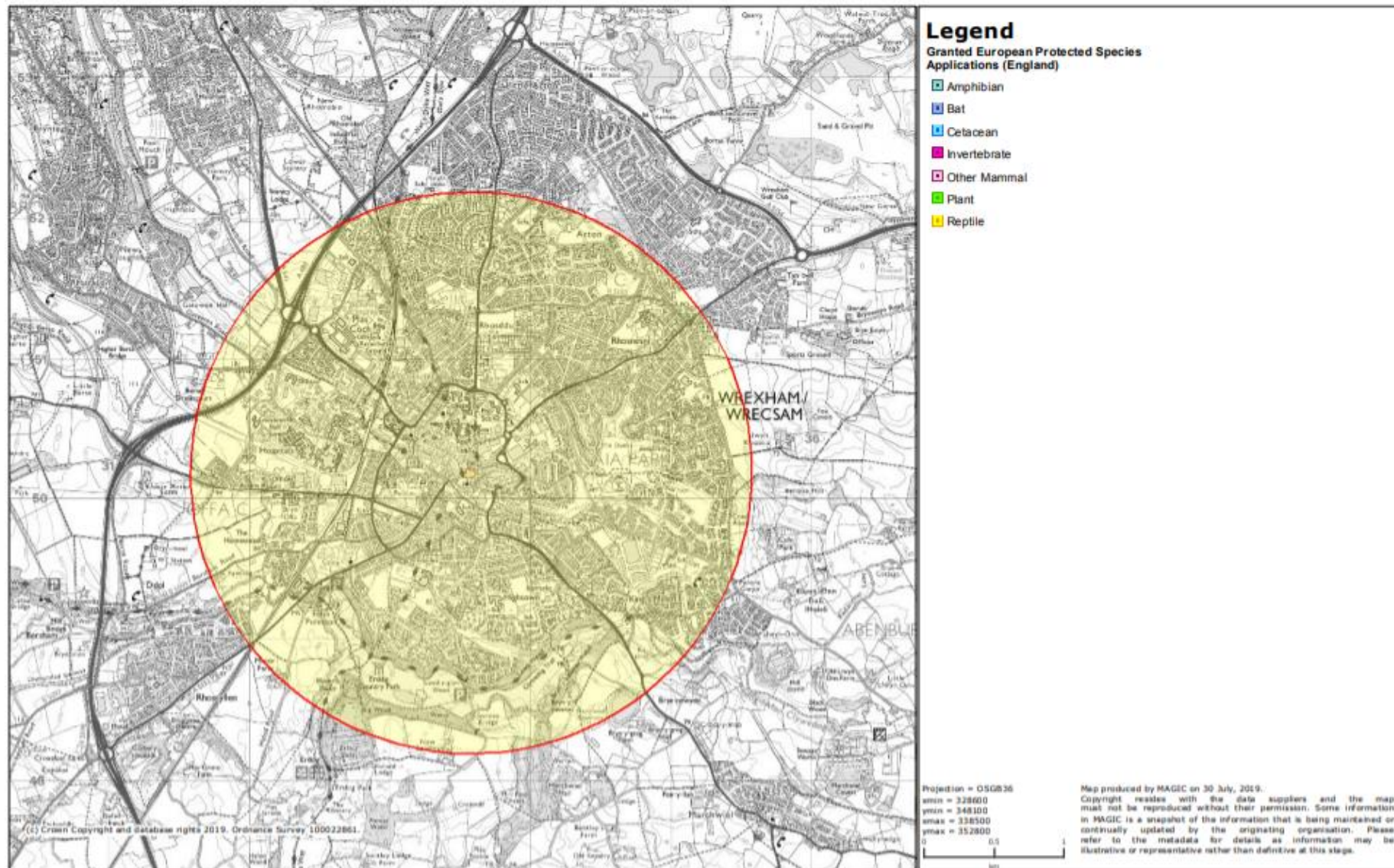
MAGiC

Priority Habitats within a 2km Radius



MAGiC

EPSLs within a 2km Radius



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 (draft 2018)

Paragraph 5.42 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 The State of Natural Resources Report (SoNaRR) (published by Natural Resources Wales and Area Statements should be taken into account. Development plan strategies, policies and individual development proposals must take into account the need to:

- Promote 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 designated sites are properly protected and managed;
- Safeguard protected 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; and
- Seek 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)

5.44 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.

5.45 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.

5.46 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.

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 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.