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CEREDIGION



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County Council

Ceredigion County Council

Bats and Development Help Sheet

Version 1

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1. Introduction

- 1.1 This help sheet aims to inform applicants for applications that may have impact on bats. This includes a broad guide on the survey requirements, including relevant guidelines, however it is advised developers speak to the LPA at pre-app stage to get specific advice.**
- 1.2 The guidance enables developers to meet the Council's proactive approach towards achieving a high quality natural environment and to address statutory duties and social responsibilities, while having a positive attitude to development.
- 1.3 Bats are protected under the Habitats Directive 1992, Conservation of Habitat and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended). This makes it illegal to:
- Intentionally or deliberately take, kill or injure a bat
 - Damage, destroy or obstruct access to bat roosts
 - Deliberately disturb bats
- 1.4 Not only does this legislation apply to the householder and those doing the work, but the Local Authority has a legal duty to have regard for the Habitats Directive within the Regulations.
- 1.5 Therefore, it is important to ensure that developments consider the impact of bats early on in order to avoid contravening legislation, as well as minimise additional costs and time delays.
- 1.6 Bat survey requirements with regards to wind turbines are not covered here but can be found in the 'Nature Conservation and Wind Turbines Help Sheet' on the Council website www.ceredigion.gov.uk.
- 1.7 Additional information providing guidance for householders on what to expect from bat surveys can be found on the CIEEM website¹.

Key messages (see Nature Conservation Supplementary Planning Guidance for more information)

- All applicants for developments affecting buildings, trees, bridges, mines or removal of vegetation will need to consult the Nature Conservation SPG/speak to the LPA to determine whether bat surveys are required. If required, the level of survey will depend on the nature and scale of development and the sensitivity of the surrounding habitat and species.
- Pre-application advice with the Local Planning Authority, including the LPA Ecologist is available on request (small fee may be payable) to discuss necessary surveys and whether suggested mitigation and plans are suitable.
- Surveys should be carried out at the beginning of the process so that they can inform design, rather than trying to fit the results around the current design.

¹ <http://www.cieem.net/publications/40/what-to-expect-from-a-bat-survey-a-guide-for-uk-homeowners>

- Various surveys and mitigation can only be carried out at certain points of the season, and therefore this needs to be considered in the timing of the application and development construction.
- Reports should include the results of the survey **AND** an assessment of the effect of the development, recommendations for mitigation etc.
- The recommended actions and mitigation included in these reports and **advice must be included within the proposal plans** where they relate to the design of the development, layout etc., unless agreed with the Planning Officer that this is not necessary. Other recommendations (such as licensing for a protected species, management agreements etc.) will be covered by conditions/informatives depending on the context. Alternatively, these can also be included on the plans to reduce the number of conditions on a permission. In some cases, Section 106 agreements may be required where conditions are not suitable. Depending on the site and its features, this may require financial contribution.
- Surveys, assessments and reports are required to be carried out in line with the British Standards for Biodiversity: Code of Practice for Planning and Development (BS42020:2013) and relevant guidelines (unless justified deviations) and by a suitably qualified, knowledgeable and experienced ecologist.

2. Survey Requirements


- 2.1 All Development will be required to meet National (relevant policies within Planning Policy Wales (PPW) and Technical Advice Note (TAN) 5), Local policies (LDP Policies DM14 and DM15) (including the Nature Conservation SPG) and the British Standards for Biodiversity: Code of Practice for Planning and Development (BS42020:2013). The Council is also required to meet its duties under the Conservation of Habitat and Species Regulations 2010 (as amended (Regulation 9(5)) and Section 6 of the Environment (Wales) Act 2016.
- 2.2 When considering whether a bat survey is required, applicants should first refer to **Table 3 of the Nature Conservation SPG** 'Local requirement for protected and priority species for when a survey and assessment is required'. The part relating to bats is repeated in **Table 1** below. Applications which meet the criteria in this table will automatically be invalidated if no bat survey is incorporated with the application.
- 2.3 This table is meant as guidelines and if unsure whether your development meets the criteria, please contact the Local Authority Planning Ecologist to receive pre-application advice (may incur a small fee). If the Ecologist informs you that a survey is not required, but it meets the criteria, please submit the written correspondence with the ecologist as evidence with the application in order for it to be validated. *Please note:* if plans have changed since discussed with the ecologist at the pre-application stage, you may be requested to carry out a survey once the Ecologist is consulted on the application.
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- 2.4 In reality, most development which involves demolition/alterations to any building, unless it is an extension with a suitable distance from the soffits/eaves, is likely to require at least a bat scoping survey, so this should be considered when planning development timescales and design.
- 2.5 All surveys will be required to be carried out by a suitably qualified, knowledgeable and experienced ecologist within the appropriate season and to appropriate survey standards and methodology. The Council requires that **all bat surveys are carried out/led by a licenced bat ecologist**. The Nature Conservation Supplementary Planning Guidance (SPG) (to be available on the Ceredigion County Council website www.ceredigion.gov.uk) provides further information on survey requirements and survey timings generally.
- 2.6 All bat surveys and assessments will need to be carried out in accordance with the Bat Good Practice Survey Guidelines (2016). As a minimum they must incorporate bat scoping survey, with further surveys carried out where identified (or requested by the LPA Ecologist/NRW). Where further surveys are identified to be required, these will need to be carried out before the application is submitted, otherwise these will be invalidated.
- 2.7 In line with TAN 5, where there is a risk of bats being present, even when the risk is low, bat surveys are required to determine the presence of bats, species and how they use the site before planning permission is given. Therefore, bat surveys cannot be conditioned and neither can mitigation for bats without an understanding of what is there and how they use it.

Table 1. Local requirement for protected and priority species for when a bat survey and assessment is required

Proposals for development that will trigger a protected species survey
Proposed development which includes the modification, conversion, demolition or removal of buildings and structures (especially roof voids) involving the following:
<ul style="list-style-type: none"> • any buildings with; slate roofs, gable ends, wet cladding, dense climbing plants, hanging tiles and loft spaces, non-sealed soffits; especially demolitions and changes affecting the roof (e.g. house extensions, loft conversions, re-roofing, extensions up to/close to soffits* etc.); • traditional buildings such as churches, chapels etc.; • all agricultural buildings (e.g. farmhouses and barns) particularly of traditional brick or stone construction and/or with exposed wooden beams greater than 20cm thick; • pre-1914 buildings within 400m of woodland and/or water; • all tunnels, mines, kilns, ice-houses, adits, military fortifications, air raid shelters, cellars and similar underground ducts and structures; or • all bridge structures, aqueducts and viaducts (especially over water and wet ground) • Some proposals within 200m of a woodland (depends on the proposal)
Proposals involving lighting of churches and listed buildings or flood lighting of green space within 50m of woodland, water, field hedgerows or lines of trees with obvious connectivity to woodland or water or medium to high roost potential.
Proposals affecting woodland, or field hedgerows/hedgebanks, or stone walls etc and/or lines of trees, especially those with obvious connectivity to woodland or water bodies and those that are south facing (run east to west).
Proposed tree work (felling or lopping) and/or development affecting <ul style="list-style-type: none"> ▪ old and veteran trees that are older than 100 years; ▪ trees with obvious holes, cracks or cavities, flaking bark, exposed tears and/or splits ▪ trees with a girth greater than 1m at chest height;
Proposals for wind turbines, single and multiple, PV arrays and hydro schemes (see separate guidance available on the LA website)
Proposals affecting gravel pits or quarries and natural cliff faces and rock outcrops with crevices, caves or swallets.
Some proposals affecting or within 200m of rivers, streams, canals, lakes, ponds, marshy grassland or other aquatic habitats (depends on the proposal)
Proposals affecting rank or species-rich grassland or scrub
Proposed development affecting any buildings, structures, feature or locations where <u>protected/priority species are known to be present</u> *.

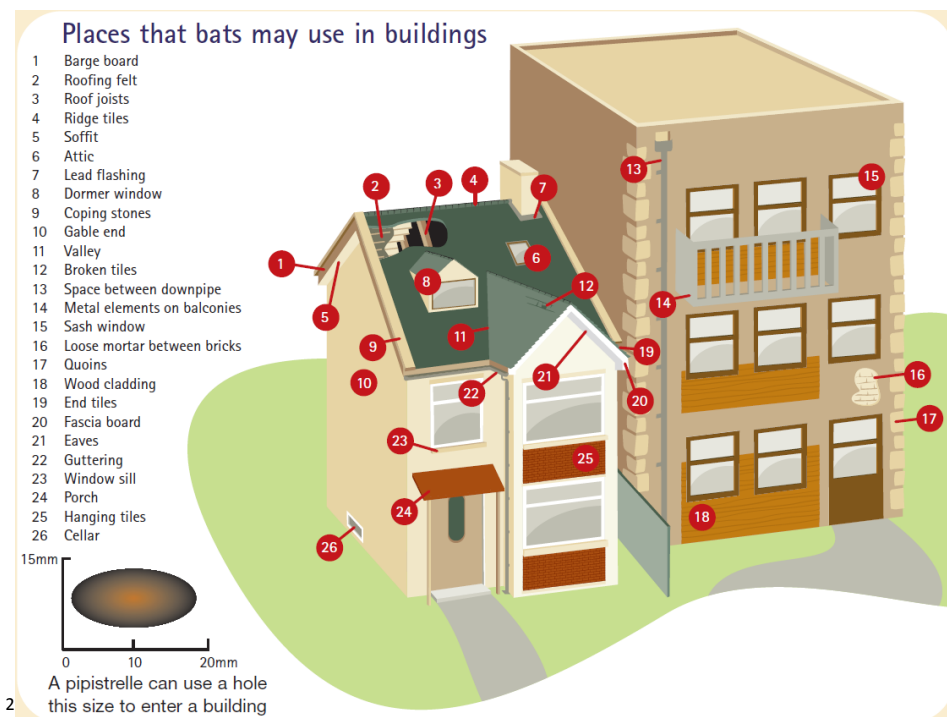
*Where extension/new build is within 500mm of soffit/eaves

3. Survey types

- 3.1 Depending on the site and the nature/scale of development and what information is needed, different surveys may be appropriate, a brief description of these can be found below. Detailed description and guidance can be found in the BCT Bat Survey Good Practice Guidelines 2016.
- 3.2 It is important to determine not only whether bats are there, but how they use the site e.g. where they roost, what type of roost it is, how they access it, when they use it, where they forage, where their flight lines are; what species they are, and; rough numbers. All this information creates a picture and determines, if bats are found, how best the impacts can be mitigated, and rarely, if they can at all. This information would then feed into a licence application prior to development, where required.
- 3.3 This breadth of information requirements is why further surveys are required even when bats are found, as depending on the roost, it is not always possible to pick up all that information in one survey. It is also why several surveyors are often needed.

Bat Scoping Survey

- 3.4 A bat scoping survey incorporates a thorough internal and external inspection along with a desk based study and is used to make an assessment of whether a bat emergence and/or activity survey is required. Scoping surveys should be carried out using appropriate equipment, such as ladders and high-powered torches, where necessary. Some bat surveyors will also do an evening emergence survey as part of the scoping survey (in active season).



² Bat Conservation Trust Bats in Buildings http://www.bats.org.uk/pages/bat_roosts.html

- 3.5 The bat scoping survey shall incorporate all of the areas potentially used by bats affected by the development, e.g. access improvements that would result in the loss of trees/hedgerow.
- 3.6 Bat scoping surveys CAN be carried out outside of the activity period (which is May – August (maybe September)), however, in accordance with the Bat Good Practice Survey Guidelines (2016), may be less likely to rule out further bat survey work due to the inactivity. Therefore, this should be a consideration when commissioning work.
- 3.7 The bat scoping survey assessment will take into account the internal and external assessment, desk based study, surrounding habitat and connectivity to the wider landscape to make an assessment as to whether the structure in question is negligible, low, moderate or high risk with regards to bat potential, or may confirm there is some presence by way of droppings, feeding remains or staining. In accordance with TAN 5, all structures with a low risk or above will require full bat emergence/re-entry surveys during the active season. The requirement with regards to number of surveys is determined by the Bat Good Practice Survey Guidelines (2016) and any deviations from this will need to be justified and agreed.
- 3.8 The bat scoping survey assessment may also/instead identify that hibernation surveys are required during the hibernation period (can be carried out between December and February), or that activity surveys are required (looking at how bats use the area not just the structure).
- 3.9 If trees are to be impacted by the development, the bat scoping survey should include a bat tree roost potential assessment which may also trigger further surveys.

Bat emergence/re-entry survey

- 3.10 The bat emergence/re-entry should be commissioned following the bat scoping survey determining the structure to be low, moderate or high risk, or has confirmed bat presence³ or a tree (which will be affected by the development) has been categorised as medium or high potential or is a known/confirmed roost⁴.
- 3.11 Surveys must be carried out during the bat active season, when bats are likely to be in their roost. This is generally May to August (sometimes September), depending on weather. If it is suspected that the site hosts a maternity roost, at least one survey will need to be between late May/early June- August (depending on weather). Further details on timing can be found in the Bat Good Practice Survey Guidelines (2016).
- 3.12 This survey incorporates a survey at dusk/dawn to assess any bat emergence from/re-entry into the potential roost using bat detectors to and visual assessments. Surveyors will use hand-held detectors and static detectors (left overnight for one to a number of nights) to determine bat presence and species. Visual assessments will also help to identify confirmed or possible access points and flight lines. Several surveyors are therefore often needed to ensure all potential

³ Sometimes either due to obvious moderate-high risk, or know bat roost, a full bat survey may be requested straight off from the LPA Ecologist/NRW/Consultant Ecologist. This should incorporate the scoping survey, any bat emergence/re-entry surveys, activity surveys and hibernation surveys.

⁴ Bat Conservation Trust Bat Survey Good Practice Guidelines 2016 Chapter 6 and 7

access points can be viewed during the survey. Timing of survey, numbers and behaviour can help identify the type of roost, e.g. maternity, night perch etc.

- 3.13 Vantage point surveys may be used alternatively when looking at tree surveys, but this will be dependent on the site. Track back surveys may also be utilised when there are several buildings involved.
- 3.14 The level of survey requirement is determined by the guidelines and any deviations should be justified and agreed with the LPA/NRW.

Bat Activity Surveys

- 3.15 Bat activity surveys are used to determine flight lines and foraging activity of bats. This will be particularly relevant where there is to be a section of hedgerow to be removed or patches of scrub/trees/pasture. They are also required for most wind turbine developments (see Nature Conservation and Wind Turbines Help Sheet⁵ for more information).
- 3.16 Activity surveys are usually carried out with a combination of static detectors left over night or several nights, and people using hand-held detectors and walking a pre-determined transect.
- 3.17 Activity surveys can identify how bats are using the immediate habitat, likely roost direction, species and an indication of usage.
- 3.18 Again, the level of survey requirement is determined by the guidelines and any deviations should be justified and agreed with the LPA/NRW.

Hibernation surveys



3.19 During the winter bats going into a state of torpor, often referred to as the hibernation period. This is where they have significant periods of inactivity without feeding. Disturbing them during this time could result in illness/death as they would use unnecessary and valuable energy to fly, and would be unlikely to find a suitable alternative in time.

3.20 Hibernation surveys are carried out using high powered torches and micro camera scopes. In many cases hibernation surveys may not be possible, for instance where it is suspected bats are hibernating in wall cavities or deep in trees.

⁵ www.ceredigion.gov.uk

Report

- 3.21 The report should include the results of the above and an **assessment of the impacts**, including recommended further surveys if necessary.
- 3.22 This should include an assessment of construction and post construction impacts, including (but not limited to):
- Habitat loss
 - E.g. bats due to disturbance from habitat, bat roosts destruction or obstruction
 - Disturbance
 - E.g. bats from habitat, bats while roosting including hibernation, lighting
 - Displacement
 - E.g. bats from foraging sites/flight lines
 - Death to individuals
 - E.g. bats through construction
 - Cumulative impacts
 - From all of the above
- 3.23 **Table 2** below details the scope, detail and information that should be included in all ecological survey and assessment reports.

Table 2. Scope, detail and information that should be included in all ecological survey and assessment reports

Requirements	Checklist
Ensure that the scope of the survey has been considered and that the correct survey is carried out	
Disclaimer to be signed by the agent/architect/developer and applicant stating they have read and understood the survey report: I, [name], acknowledge receipt of the ecological survey dated [date] relating to [address]. I have read the contents and understand my legal obligations regarding any protected species and habitats that may be present at this address. [Signed].	
The surveyors name, qualifications, professional membership (where applicable), experience and relevant EPS licence.	
Executive summary setting out the key findings, recommendations (including mitigation), limitations and if further surveys are required (in bold).	
A note to say whether any of the information is sensitive and therefore included in a separate confidential annex.	
Introduction and site summary (site name, grid reference, site location plan, date of survey).	
Desk study (to include summary from Local Records Centre data search – West Wales Biodiversity Information Centre).	
Survey methodology (cross reference to guidelines followed, justification for method, equipment to be used, limitations).	
A description of the building/structure, trees/hedgerows, adjoining habitat/site, corridors linking habitat features and overall assessment of the potential of the site to support bats both	

externally and internally (should include illustrations or photos). Also include any details of events occurring on site before or after survey has been carried out e.g. agricultural practices, site clearance etc. ⁶).	
Plan showing location of any bat observers where bat dusk and dawn surveys have been carried out and locations of any mobile transects or static detectors	
Survey results (to include species scientific name, number found (if applicable), recorder name, date recorded, weather conditions, date, time of survey, duration). Summary of bat evidence found (such as number/type of droppings, staining), results of activity and/or vantage point surveys, conclusions (such as type of roost) and assessment of impact of the development including a conclusion in relation to the maintenance of the favourable conservation status (FCS) of the affected population.	
Map summarising records of species and habitats (to include Phase 1 Habitat / NVC codes (where relevant), target notes, structures/features) with associated photographs.	
Plans showing location of evidence (such as suitable features, identified roosts, access points, flight lines, light-sampling, swarming areas).	
Overall evaluation of the site, habitat and species in their ecological and physical context and according to status in legislation (EPS, LBAP).	
Assessment of potential impact(s) of development (to include direct, indirect, construction, ongoing use, short and long term effects) on the site, species and adjoining habitats and how impacts can be avoided, mitigated or compensated for (showing that a step-wise approach has been taken ⁷). Any alternatives considered should be detailed and it should be assessed whether there is likely to be a fall or gain in numbers/extent of the species/habitat. ⁸ Reference to impact should incorporate the consideration of National and Local Policy and relevant legislation.	
An assessment of indirect effects with particular reference to Regulation 50 of the Habitat and Species Regulations 2010 (as amended) and incidental capture/killing	
Recommendations (to include details of proposed mitigation, compensation and enhancement and method statement e.g. timing). Clearly stating which recommendations are compulsory and specify actions for the agent/developer/applicant in relation to the planning application. This must be discussed with the architect/agent and be included on the architectural drawings (dimensions, location of access points, materials, enhancement).	
Details of proposals that will enhance, restore or add to features or habitats or sites or those used by protected species. ⁹	
Where bats are found, assess and advise on requirement for Natural Resources Wales EPS licence and provide a method statement within the report in line with NRW licence requirements (whether a licence is required or not). It is recommended that this follows the layout of Part C of the licence application form ¹⁰	

⁶ See Clause 6.4.8 in BS42020 (BSI,2013) for more information

⁷ See Section 7, paragraph 2.4 of TAN 5 and Clause 5.2 of BS42020

⁸ See 6.5 of BS42020

⁹ Requirement of Ceredigion LDP Policy DM15 as well as DM06, NERC Duty and Clause 6.3.3 of BS42020

¹⁰ <http://naturalresourceswales.gov.uk/apply-buy-report/apply-buy-grid/protected-species-licensing/european-protected-species-licensing/do-i-need-a-licence/?lang=en#.U0exWaL4Z6Y> provides the licence application and guidance

4. Avoidance, Mitigation, Compensation and Enhancements

- 4.1 The following information details how you can try to avoid impacts to bats, mitigate impacts to reduce them and compensate for any impacts which can't be mitigated in line with TAN 5 and Policy DM15: Local Biodiversity Conservation. Some suggested enhancements are also listed below but these will be generally site specific and should be recommended by the consultant ecologist.

Avoidance and mitigation

- 4.2 When planning your development, in order to try to reduce risks to bats, the following should be considered. This may reduce the amount of mitigation and survey effort required.
- If making alterations to a dwelling, **avoid impacting the roof, soffits, eaves** etc. and bring any **extension more than 500mm below the eaves**.
 - **Retain trees and hedgerows** wherever possible.
 - Ensure **lighting is in line with the recommendations** on the BCT website http://www.bats.org.uk/pages/bats_and_lighting.html and there is no unnecessary lighting.
- 4.3 Where impacts are unavoidable, works may be able to continue under Continued Ecological Functionality (CEF) if the roost and access are going to be retained and the work will be carried out outside of the most sensitive season. A bat ecologist may also need to be present. Bat surveys will still be required in these cases, but works may be carried out with just a method statement and a licence will not be required. If works are thought to fit the CEF principle, it will need to be agreed with Natural Resources Wales.
- 4.4 See BCT Bats and Buildings leaflet and <http://roost.bats.org.uk/principles/avoidance> and Natural England Bat Mitigation Guidelines 2004 for more guidance on avoidance and mitigation.

Compensation

- 4.5 Where roosts or access points may be permanently lost or altered, the roosts/access points preferably should be reinstated in the altered building, however in some cases a more suitable alternative may be agreed.
- 4.6 The compensation required will depend on the species present, the type of roost, the roost itself and the numbers of bats likely to be involved. Compensation for a single pipistrelle using a site as an occasional day roost will be a lot less than a greater horseshoe maternity roost for example. See Figure 4 of the English Nature Bat Mitigation Guidelines 2004 for information on conservation significance.
- 4.7 Implications with regards to changes to the use of the building must also be considered. E.g. where loft access is required, breathable membrane cannot be used and therefore, in order to meet building control requirements, ventilation will need to be built in to the loft space. Other impacts such as changes in temperature must be considered e.g. through solar panels or external wall insulation, and where necessary adaptations made.
- 4.8 There may be some instances where compensation is not possible/feasible and therefore an application may need to be refused. **These cases are very rare** and many applications get through with minor changes to their plans and timings.

- 4.9 Some habitat affected may be able to be recreated or alternative compensatory measures incorporated. For example, where areas of hedgerow may need to be removed for access, it may be possible to replant the hedgerow back from the visibility line and therefore just a temporary impact on flight lines.

Enhancements

- 4.10 As a requirement of TAN 5 and LDP Policies DM06 and DM15, ecological enhancements are required for developments. For householder developments, this could be as simple as providing a bat tube within the wall of an extension, a bat tile on a new roof or a bat box on an existing wall. For larger developments, a combination of these plus suitable vegetative planting would be appropriate.
- 4.11 For species that typically roost in crevices, roosting opportunities can be provided in a variety of ways including:
- Access to soffit boxes and eaves via a small gap (15-20 mm) between soffits and wall
 - Timber cladding mounted on 20-30 mm counter battens with bat access at the bottom or sides
 - Access to roof voids via bat bricks, gaps in masonry, soffit gaps, raised lead flashing or purpose-built bat entrances
 - Access to roof voids of the top of a cavity wall by appropriately constructed gaps.
- 4.12 Unless bitumen felt is used/to be used within the whole of the loft space, along with ventilation techniques, new access to loft spaces as enhancements should be avoided as bats can get entangled in breathable membrane¹¹.
- 4.13 Bat boxes may in some cases be a more suitable alternative and may be placed on buildings or within trees (depending on the species and type of roost). Consideration of the maintenance and longevity of the boxes should be given and, particularly with regards to wooden bat boxes, details of how and when they will be replaced must be provided.
- 4.14 Non crevice-crawling species may be more complicated to provide for and any enhancements must be relevant and appropriate. Further advice can be sought from Bat Conservation Trust or NRW.



Monitoring

- 4.15 Where a licence is required, and in some other instances, at least two years post development monitoring will be required to ensure that the proposed mitigation and compensation has been deemed successful.

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[http://www.bats.org.uk/news.php/254/bats_and_breathable_roofing_membranes_update_of_findings %20](http://www.bats.org.uk/news.php/254/bats_and_breathable_roofing_membranes_update_of_findings_%20)

5. Consultation

- 5.1 Upon receiving yours/the developer's/your client's application, the Local Authority Planning Ecologist will be consulted. Where bat surveys have been carried out and high bats/roosts are found, NRW will also be consulted.
- 5.2 If a bat survey or at least a scoping survey is required, you may be informed by the Validation Team upon validation if it is clear that it meets our criteria in Table 1 above, or you may subsequently be contacted following consultation with the LA Planning Ecologist. You will then have 10 days to supply the bat survey as requested.
- 5.3 Therefore, it is recommended that advice is sought from the Ecologist (fees may be applicable) before submitting an application in order to determine whether a bat survey is required and to what extent. This will also allow better planning of a development and reduced costs on architectural drawings as any mitigation required in terms of timings and modifications can be incorporated up front.
- 5.4 NRW will only be involved where there are more high risk cases, e.g. less common bats, maternity roosts. In all other cases it is likely that the LA will be leading on responses, and any requirements with regards to mitigation/compensation etc within those cases. The LA will also be responsible for requesting bat survey information. This is in line with the NRW GPG 3 'Approach to Bats and Planning' in which NRW have provided standard advice for low risk cases.
- 5.5 Please note that there may be instances that the LA may require more stringent mitigation/compensation than that prescribed by NRW and will require enhancements. This is in order to be in accordance with our duties as part of the Environment (Wales) Act 2016.
- 5.6 Where a licence is required, a copy of licences will often need to be provided before works commence in order to demonstrate compliance. **Please check the conditions for the requirements specific to your application.**

6. Useful documents, links and references

- Bat Conservation Trust (2016) Bat Survey Good Practice Guidelines
- Bat Conservation Trust (2014) Bats and Breathable Roofing Membranes - Update of Findings [Available online]
http://www.bats.org.uk/news.php/254/bats_and_breathable_roofing_membranes_update_of_findings_%20
- Bat Conservation Trust (n.d.) Avoidance [Available online] <http://roost.bats.org.uk/principles/avoidance>
- Bat Conservation Trust (n.d.) Lighting [Available online]
http://www.bats.org.uk/pages/bats_and_lighting.html
- BSI (2013) British Standards for Biodiversity: Code of Practice for Planning and Development (BS42020:2013)
- Ceredigion County Council (2015) *Local Development Plan Nature Conservation Supplementary Planning Guidance*
- Ceredigion County Council (2015) *Nature Conservation and Wind Turbines Help Sheet*
- CIEEM (2013) Guidelines for Preliminary Ecological Appraisal. [Available online]
http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf
- CIEEM (2015) *What to Expect From a Bat Survey: A Guide for UK Homeowners*. [Available online]
<http://www.cieem.net/publications/40/what-to-expect-from-a-bat-survey-a-guide-for-uk-homeowners>
- Conservation of Habitat and Species Regulations. (2010).
- English Nature (2004) *Bat Mitigation Guidelines*
- Environment (Wales) Act 2016.
- Hedgerow Regulations 1997.
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<http://jncc.defra.gov.uk/>
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<http://jncc.defra.gov.uk/page-2861>
- Natural Resources Wales (NRW). (2015). *GPG3 Approach to Bats and Planning*
- Welsh Assembly Government. (2009). *Planning Policy Wales: Technical Advice Note (TAN) 5: Nature Conservation*.
- Welsh Assembly Government. (2010). *Planning Policy Wales (PPW)*.
- West Wales Biodiversity Information Centre (WWBIC) <http://www.wwbic.org.uk/>
- Wildlife and Countryside Act. (1981). (*as amended*).