Ceredigion

Local Development Plan 2007 - 2022

Nature Conservation and Single Wind Turbines

Help Sheet

July 2015

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CEREDIGION County Council

Contents

1. Introduction

1.1.1 This Help Sheet aims to build on guidance within the Nature Conservation Supplementary Planning Guidance (SPG), in order to clarify what information is required to be submitted with a single wind turbine application, with regards to nature conservation. This includes a broad guide on the survey requirements, however it is advised developers speak to the Local Planning Authority (LPA) at pre-application stage to get specific advice.

1.1.2 The guidance included in this help sheet 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 renewable energy. It will guide how to meet in particular LDP Policies DM14: Nature Conservation and Ecological Connectivity and DM15: Local Biodiversity Conservation, as well as elements of DM06: High Quality Design and Placemaking, DM20: Protection of Trees, Hedgerows and Woodlands and DM22: General Environmental Protection and Environment.

1.1.3 Please note that this guidance is intended only to cover specific requirements for wind turbines and therefore should be read in conjunction with the Nature Conservation SPG which provides more generic advice.

1.1.4 Please see Figure 1 for an outline of the process with regards to ecological requirements.

Key messages drawn from guidance in this Help Sheet and the Nature Conservation SPG (see Nature Conservation Supplementary Planning Guidance for more information (NC SPG))

- All applicants for single wind turbine application will be required to submit an ecological survey report. The level of survey required will depend on the nature and scale of development and the sensitivity of the surrounding habitat and species.

- Pre-application advice with the LPA, 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.

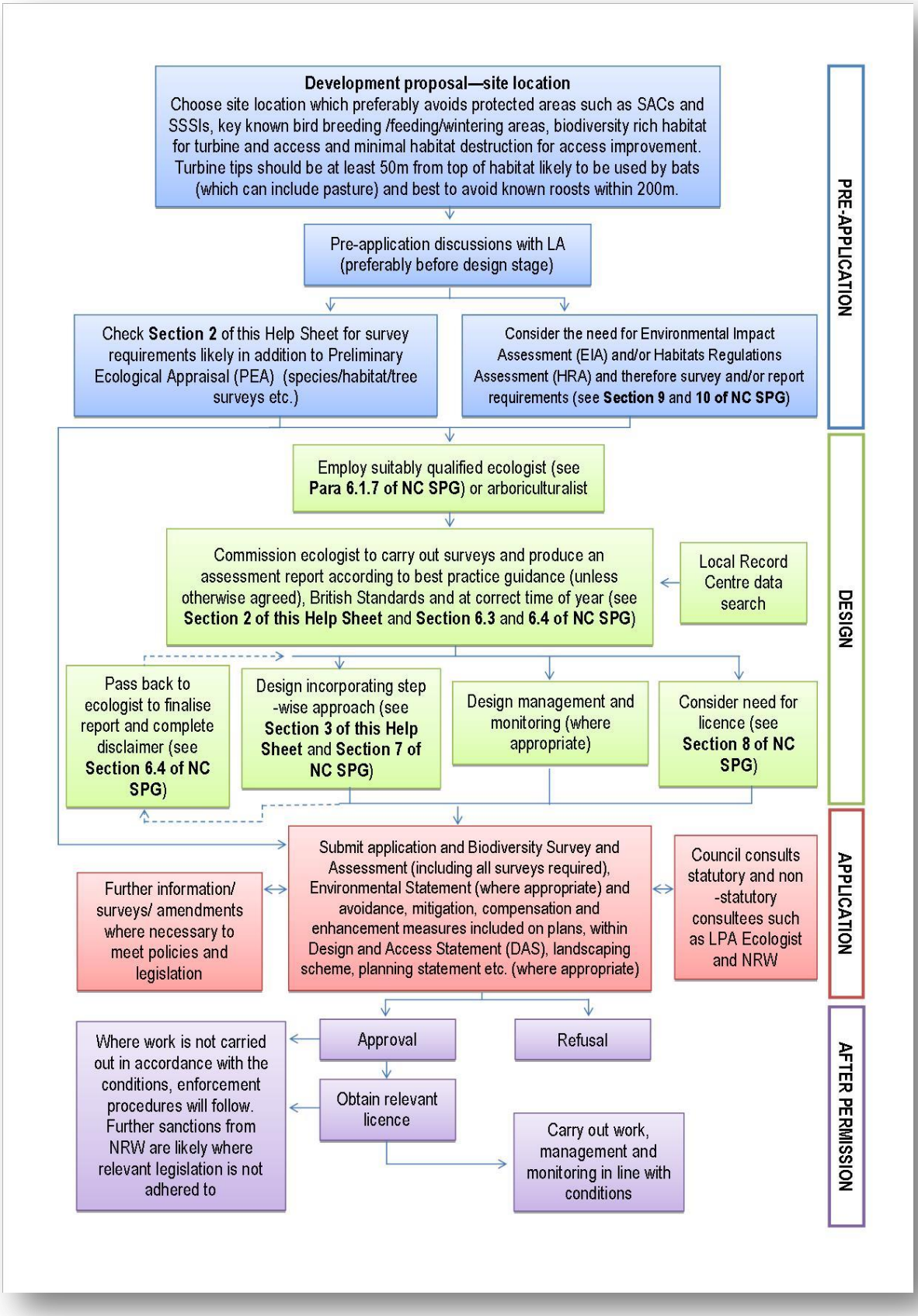
- Various surveys and mitigation can only be carried out at certain points of the season, and therefore this needs to be considered in the timing of the application and development construction.

- Reports should include the results of the survey **AND** an assessment of the effect of the development on the species/habitats/sites, recommendations for mitigation e.g. timing of works and mitigation, monitoring 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, timing etc.) will be covered by conditions/informatives depending on the context. 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.

Figure 1. Outline of the planning process with regards to nature conservation and single wind turbine schemes.



2. Survey Requirements

2.1.1 All Wind Turbine Development will be required to meet National (relevant policies within Planning Policy Wales (PPW) and Technical Advice Notes (TAN) 5) and TAN 8) Local policies (LDP Policies DM14 and DM15) 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 40 of the Natural Environment and Rural Communities Act 2006.

2.1.2 In order for the Council to determine whether the application meets these policies and to ensure the Council meets its duties, a Preliminary Ecological Appraisal (PEA) of the site and immediate surroundings will be required to support any proposed wind turbine application, regardless of size and number.

2.1.3 Further surveys may be required dependant on the nature, scale and location of the turbine(s) and the sensitivity of the local environment.

2.1.4 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 Nature Conservation Supplementary Planning Guidance (SPG) (available on the Ceredigion County Council website www.ceredigion.gov.uk) provides further information on survey requirements and survey timings generally.

2.2 Preliminary Ecological Appraisal

2.2.1 A desk study and field survey to determine the likelihood of any potential impacts on biodiversity will be required. This must include the site of the turbine and any works related to the development such as access, access improvements, cable laying, crane pads etc. The following list provides guidance for aspects to be included in the preliminary ecological appraisal. General guidance on PEA can be found on the Chartered Institute of Ecology and Environmental Management (CIEEM) website[1]. More specific requirements are listed below.

2.3 Desk Based Study

2.3.1 The following desk top information is required in order to make a desk top assessment of the potential impacts.

[1] http://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea-

Desk Based Study Requirements
Statutory and non-statutory designated sites within 2 km of the proposed development;
Special Areas of Conservation and Sites of Special Scientific Interest within 5 km of the proposed development which are designated for bat species (Bat Conservation Trust, 2012);
Special Protection Areas (SPA) and Sites of Special Scientific Interest (SSSI) within 5km of the proposed development which are designated for bird species
Bat species up to 5 km for high risk species (Nathusius' pipistrelle, noctule and Leisler's bat) ; 2 km for medium but rare (Barbestelle, serotine) and 1 km for other medium and low risk species (soprano and common pipestrelle, myotis, long-eared and horseshoe bats) *
Records for target bird species, i.e. Annex 1, Schedule 1, Biodiversity Action Plan (BAP), etc., up to 5km. *
Listing of any species under Section 42 of Natural Environment and Rural Communities (NERC) 2006 and in the relevant Local Biodiversity Action Plan (LBAP) (protected and notable (including priority) species records) within 2km. Also list current known status of species if known. *
Assessment of aerial photos to determine landscape scale features for bats and birds connecting them to onsite and offsite habitats. Graphical data displayed as a set of maps are preferred to tabulated data.
Assessment of Welsh Kite Trust records and the local bird report
Wind turbines/farms within 2km which have been consented or which are publically available in the planning system

*Must be obtained from the Local Record Centre (West Wales Biodiversity Information Centre) and other additional relevant sources such as county recorders, NRW etc. A fee may be chargeable.

2.4 Field Survey

2.4.1 An Extended Phase 1 Habitat Survey completed in accordance with the *Handbook for Phase 1 Habitat Survey - A technique for environmental audit* (JNCC, 2010) (see also CIEEM PEA guidance (footnote 1 above) should be undertaken and a report prepared in conjunction with the desk based study on the **turbine site plus a 250m buffer** and the **other areas such as cabling, access etc. plus a 100m buffer**.

2.4.2 This should be extended to include:

Field Survey Requirements
The value of the habitat and surrounding habitat including any areas affected by access, cabling, turning circles etc.
Hedgerow value as defined under the Hedgerow Regulations 1997, not just Phase 1
Signs of use by protected and priority species e.g. badger, otters etc.
Incidental records including breeding birds, winter foraging birds, reptiles etc.
Target notes and general notes of habitat potential for protected and priority species.
All buildings, trees or features within 200m of the proposed turbine development shall be externally, and if possible, internally assessed for potential roosting bats in accordance with Bat Conservation Trust 2012 Guidelines and Mitchel-Jones 2004, including land which is not in the ownership of the applicant. Also including access tracks where trees may need to be cut back, lopped or felled.
All buildings, trees or features **in the land owner's ownership** shall be externally, and if possible, internally assessed for potential roosting bats within 500m of the proposed turbine development.
Suitable trees should be surveyed for signs of use by breeding red kites (feeding remains, nests etc.) within 600m in accordance with RSPB guidelines (Forests and Birds (RSPB and Forestry Authority, 1997)), including land which is not in the ownership of the applicant/land owner.

2.5 Report

2.5.1 The report submitted to the LPA should include the results of the above and an **assessment of the impacts**, including recommended further survey (or justification for why further surveys are not required) and cumulative impacts with other wind turbines/farms and projects with similar effects.

2.5.2 This should include an assessment of construction and post construction impacts, including (but not limited to):

- Impacts on protected sites or their features
  - E.g. pollution, habitat loss, impacts on mobile species (in particular birds and bats)
- Habitat loss
  - E.g. birds/bats due to disturbance from habitat, badger sett destruction, loss of reptile basking/hibernacula, amphibian

feeding area, bat roosts, bird breeding sites etc., loss of BAP habitat

- Disturbance
  - E.g. bats/birds from habitat, breeding birds during nesting, breeding badgers, water voles
- Displacement
  - E.g. birds from breeding/feeding sites
- Death to individual species
  - E.g. birds and bats through collision and barotrauma, killing/injuring of reptiles, killing/injuring of badgers
- Cumulative impacts
  - From all of the above

2.6 Birds

Findings	Action
Potential red kite nests within 600m	Recommend construction outside bird breeding season
Potential red kite nests within 300m	Move turbine to beyond 300m or **red kite breeding survey** within appropriate season
Curlew breeding within 800 m	Recommend construction outside bird breeding season
Large flocks of birds using or passing over site	Discuss with county bird recorder. **Further survey may required**
Records of breeding habitat for high risk species within 2 km	Discuss with county bird recorder. **Further survey may required**
SSSI with bird species as features within 5 km	Ascertain risk, speak to NRW. **Further survey may be required**
SPA or Ramsar with bird species as features within 5 km	Ascertain risk, speak to NRW. **Further survey may be required**
Another turbine within 2km	Assessment of cumulative impacts. Depending on the above, **further survey likely**

2.6.1 Although RSPB support renewable energy, they do say ‘poorly sited wind farms can have negative effects on birds, leading to potential conflict where proposals coincide with areas of high activity for species of conservation concern’ (RSPB, 2014), and therefore single turbines cannot be simply dismissed as having a low impact on bird species. Site specifics will therefore need to be taken into account

2.6.2 Where the findings relate to the table above, the assessment will need to be carried out by or in discussion with a suitably qualified ecologist (e.g. ornithologist).

2.7 Bird survey and assessment requirements

2.7.1 Bird surveys and assessments (including cumulative impacts) should be carried out in accordance with the Scottish National Heritage[2] guidance on birds and wind turbines (SNH, 2006, SNH, 2012 and SNH, 2014) by suitably qualified, knowledgeable and experienced ecologists (ornithologists). Relevant information should be provided at the beginning of reports to demonstrate the ecologist's validity. Evidence of competency may be requested via CV, copies of previous reports and/or references.

2.7.2 Where methodologies including number of hours, number of seasons, timing etc. is not in accordance with these guidelines there must be a valid reason (the applicant has not provided enough time is not reasoned justification).

2.7.3 Key aspects to include within the bird survey reports include:

An assessment of desk top and field information carried out so far
Details of surveyors including the number and their qualifications/experience
Details of the survey including dates, timings, duration, weather and survey vantage points, transects etc.
Results including estimated number of individuals and species, details of type of behaviour, a map with flight patterns, etc.
An assessment of the results in terms of a turbine of the specified height at that location including: (i) The functionality of the site for foraging, migration and/or dispersal purposes; (ii) The risk of incidental injury or killing through collision, disturbance and displacement; and (iii) Cumulative impact assessment
Recommendations including further survey work and mitigation/compensation.
Recommended enhancements (added value to ecology over and above mitigation and compensation for impacts)

2.7.4 Although RSPB support renewable energy, they do say 'poorly sited wind farms can have negative effects on birds, leading to potential conflict where proposals coincide with areas of high activity for species of conservation concern' (RSPB, 2014), and therefore single turbines cannot be simply dismissed as having a low impact on bird species. Site specifics will therefore need to be taken into account.

2.7.5 Where the findings relate to the table above, the assessment will need to be carried out by or in discussion with a suitably qualified ecologist (e.g. ornithologist).

[2] Welsh guidance not currently available and therefore this guidance must be considered in the Welsh context. Deviations are therefore expected but must be justified.

2.8 Bird survey and assessment requirements

2.8.1 Bird surveys and assessments (including cumulative impacts) should be carried out in accordance with the Scottish National Heritage guidance on birds and wind turbines (SNH, 2006, SNH, 2012 and SNH, 2014) by suitably qualified, knowledgeable and experienced ecologists (ornithologists). Relevant information should be provided at the beginning of reports to demonstrate the ecologist's validity. Evidence of competency may be requested via CV, copies of previous reports and/or references.

2.8.2 Where methodologies including number of hours, number of seasons, timing etc. is not in accordance with these guidelines there must be a valid reason (the applicant has not provided enough time is not reasoned justification).

2.8.3 Key aspects to include within the bird survey reports include:

An assessment of desk top and field information carried out so far
Details of surveyors including the number and their qualifications/experience
Details of the survey including dates, timings, duration, weather and survey vantage points, transects etc.
Results including estimated number of individuals and species, details of type of behaviour, a map with flight patterns, etc.
An assessment of the results in terms of a turbine of the specified height at that location including: (i) The functionality of the site for foraging, migration and/or dispersal purposes; (ii) The risk of incidental injury or killing through collision, disturbance and displacement; and (iii) Cumulative impact assessment
Recommendations including further survey work and mitigation/compensation.
Recommended enhancements (added value to ecology over and above mitigation and compensation for impacts)

2.8.4 It is recommended that survey requirements are discussed and agreed with the LPA/NRW before they are carried out to avoid later delays

2.9 Bats

2.9.1 In most instances, bat surveys will be required with single or multiple wind turbine applications. This will include all applications in areas where there is anything above a negligible risk to bats. The following will trigger the need for bat surveys in most cases:

Bat survey trigger list*
Bat SAC within 5 km
Bat SSSI within 5 km
Pipistrelle roost within 1km
High risk species as well as barbastelle and serotine known roost records within 5km
Presence of a building, other structure, tree or habitat within 500m with medium to high risk of being a bat roost or an area with high bat activity.
Turbine blade tip within 50m of feature of high quality to bats (e.g. woodland (including scrub), traditional buildings, in-field ponds (and other water bodies), pasture and parkland)[3]. The distance of blade tip from the above listed habitats can be reduced to 30m for micro turbines (under 25m height).
Another turbine within 1km. This distance can be reduced to 500m for micro turbines.
Presence of connectivity to landscape-scale habitat features within 1km of the site
Presence of potential foraging or breeding areas either side of turbine location

* Please note that sites will need to have some element of assessment on a case by case basis and therefore, there may be other factors not listed above which may trigger the LPA or NRW to request further surveys,

2.9.2 The instances where bat surveys are not required will be rare as there are very few circumstances where impacts are likely to be negligible using the precautionary approach. In line with TAN5, which states 'the level of likelihood that should trigger a requirement for developers to undertake surveys should be low where there is a possibility that European protected species might be present' (Welsh Assembly Government, 2009). Therefore, where sites are borderline bat surveys will be required in line with the precautionary principle.

2.10 Bat surveys and assessments

2.10.1 Where bat surveys are triggered above, activity surveys will be required. The survey effort should be based on the risk. See Natural England's guidance 'TIN051: Bats and onshore wind turbines Interim guidance' and Bat Conservation Trust Bat Survey Good Practice Guidelines (2012) for more information on survey effort. Surveys and assessments must be in accordance with the Bat Conservation Trust Guidelines (BCT, 2012). Where survey effort differentiates from the guidance set out in this Help Sheet, justification must be given and this must be agreed with the LPA/NRW.

2.10.2 Surveys will need to be carried out by a suitably qualified, knowledgeable and experienced ecologist and relevant details of their competence will be required at the beginning of the report. Where a surveyor does not hold a bat licence (e.g. all potential roosts have already been inspected), evidence to support their competence to carry out the activity surveys will be required. This may include CVs, previous reports and/or references. Ideally

[3] With regards to pasture, it should be considered how species-rich the site is and the immediately adjacent habitat and connectivity. If improved pasture with poor connectivity surrounded by improved pasture then it is unlikely to require a bat survey **on this trigger alone**

surveyors will be licenced. CIEEM details the technical competencies which are required.

2.10.3 Both manual and static surveys will be required. Manual surveys will include at least transect surveys. If there is a recorded/medium to high potential bat roost within 200m then bat emergence and/or re-entry surveys will also be required. Alternatively vantage point surveys may be more appropriate (site dependent). Static (automated) surveys will be required for at least 5 consecutive nights, with one of those being at the same time as the manual surveys. Surveys should be carried out on warmer (temperature above 8C), drier evenings when the wind speed is low (between 0 and 6 m/s).

2.10.4 Timings of surveys should be considered when considering putting in a planning application. Emergence and re-entry surveys can only be carried out in the active season (April to September). Activity surveys at the proposed turbine site and surrounding area may be extended beyond the core active season depending on the area in consideration and the nature of any identified nearby roosts.

2.10.5 The minimum survey requirement is to be agreed with the local planning authority as this can vary significantly based on local knowledge of the bat population, habitat present and other factors listed in the above trigger list. However, a survey during peak breeding season (June to August) is essential. Further surveys are likely to be required throughout the active period (principally April to September). This takes into account seasonal variation in foraging behaviour. Additional survey effort will depend on risk and results of initial surveys. As a guide this is likely to be at least an additional spring/autumn static survey for low risk sites and at least a spring and autumn manual and static survey for medium risk sites. High risk sites will require much more intense survey effort in line with the BCT guidelines.

2.10.6 Key aspects to include within the bat survey report are:

An assessment of desk top and field information carried out so far
Details of surveyors including the number and their qualifications/experience
Details of the survey including dates, timings, duration, weather and survey vantage points, transects routes etc.
Results including estimated number of individuals and species, details of type of behavior (direction of travel, foraging or commuting), height, distance from bat detector's microphone, time of bat passes, a map with flight patterns, etc.
An assessment of the results in terms of a turbine of the specified height at that location including: (i) The functionality of the site for foraging and/or dispersal purposes; (ii) The risk of incidental injury or killing; (iii) Providing enough information to inform assessment in respect of demonstrating no detriment to the maintenance of the Favourable Conservation Status of each population or colony of bats; and

(iv) Cumulative impact assessment
Recommendations including mitigation/compensation and further survey work
Recommended enhancements (added value to ecology over and above mitigation and compensation for impacts)

2.10.7 It is recommended survey requirements are discussed and agreed with the LPA/NRW before they are carried out to avoid later delays.

3. Avoidance, Mitigation, Compensation and Enhancements

3.1.1 The following information details how you can try to avoid impacts to wildlife, mitigate impacts to reduce them and compensate for any impacts which can't be mitigated in line with TAN 5 and LDP 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.

3.2 Avoidance and mitigation

3.2.1 When planning the location and construction of the turbine, in order to try to reduce risks to wildlife from the turbine, the following should be incorporated. This may reduce the amount of mitigation and survey effort required, and in some cases objection to the turbine from ecology. Most of these elements can be determined from the PEA.

- **Turbines should be based in improved fields and any cabling, access tracks or other requirements associated with the turbine, including off-site access, should avoid removing trees, hedgerows, marshy grassland, scrub, woodland or any other habitat important for biodiversity**. Where they aren't, further surveys may be required including Phase II habitat surveys, invertebrate, birds, reptiles etc. depending on extent and quality of habitat affected.
- **Turbines should be located at least 300m from an active red kite nest**.
- **Turbines should be located at least 50m from habitat more likely to be used by bats. 30m for Micro turbines.**
- **Diggings should be avoided within 30m of an active badger sett**. Where within 30m, appropriate mitigation shall be required and need to be agreed. A badger licence is likely to be required.
- **Any diggings should be covered over at night and a method of escape provided** e.g. plank of wood placed in the digging to allow any animals to escape.
- **Construction should be avoided when brown hares are breeding** (determined by pre-construction survey).
- **Construction of the turbine should be carried out outside of bird breeding season**. This is generally good practice but may be a requirement if there are birds sensitive to disturbance from construction within 1km. This would usually be March to August inclusive but may be February to June inclusive for red kites.

3.3 Curtailment

3.3.1 Where it has been shown through surveys that the turbine may impact bats or birds, it may be possible to restrict turbine operation by way of curtailment in order to minimise effects. This may be with regards to certain whether conditions such as wind speed, temperature etc. or times of day or year or some other measureable factor.

3.3.2 All high risk turbines will require thorough bat survey data to support the application. Where a turbine is a low or medium risk turbine with regards to

potential impact on bats, it may be feasible to apply a curtailment to the application prior to all the required survey work is carried out. This is under the discretion of the LPA and the application must at least meet the following criteria:

- Be a low or medium risk (as defined by LPA/NRW) site
- Include at least one survey carried out within the BCT Bat Survey Good Practice Guidelines and the site still be determined as low or medium risk
- Include within the DAS/Planning Statement the statement that it will be switched off 30 minutes before dusk and 30 minutes after dawn all year round
- Incorporate a Bat Mitigation Statement and Curtailment Plan which identifies:
  - Technical specifications of equipment to ensure suitability for curtailment purposes;
  - Mechanisms that will be undertaken to evidence and audit implementation of curtailment plans

3.3.3 Alternative criteria to when the turbine may be switched off may be acceptably devised from evidence of survey work, but again will be at the discretion of the LPA/NRW and details will need to be provided in the curtailment plan.

3.3.4 Where a curtailment condition has been applied to a turbine, the applicant may be able to show through additional survey work that the curtailment could be made more lenient, or removed entirely, and therefore could apply to the LPA to vary a curtailment condition. Where an applicant is considering this approach they should contact the LPA to determine the level of survey work which is likely to be required.

3.3.5 It should be noted there is no guarantee that a condition may be able to be varied or removed as it will all depend on evidence. Therefore, developers should not count on the condition being removed as part of their economic evaluation of the turbine development.

3.4 Compensation

3.4.1 Some habitat which is 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 elsewhere or to fill gaps of existing hedgerows. Areas proposed for compensation must be incorporated within the PEA and on the plans.

3.5 Enhancements

3.5.1 In line with the requirements of LDP Policy DM15, all developments require ecological enhancements. These are features for wildlife which provide a benefit over and above mitigation and compensation to achieve a net gain in biodiversity, as required by TAN 5.

3.5.2 In many cases, the options available on site may encourage bats and birds to the site which would be counterproductive due to the potential negative

impact this may have. Therefore, the enhancements may need to be carried out off site through management or creation of wildlife habitats elsewhere on the land holding. Required enhancements must be discussed as part of the ecological surveying and proposed enhancements included in the Ecology reports or in a separate Enhancement/Mitigation Plan. It must be clear what is proposed as enhancement as opposed to mitigation/compensation.

3.5.3 The proposed enhancements must be simple and achievable, endorsed by the LPA Ecologist, and the plan must then be implemented as approved. If necessary, we would welcome the opportunity to visit the site and agree the scope of the scheme prior to submission.

3.6 Monitoring

3.6.1 Where appropriate the LPA may require monitoring of the development. This may for example incorporate monitoring of bat or bird casualties or bat or bird activity. In some cases it may be more appropriate to add a condition that requires permitting access to the site for the LPA or a person appointed by the LPA for monitoring purposes. The requirements will be site specific.

4. Who to contact

Local Authority
Contact the LA planning Ecologist at ecology@ceredigion.gov.uk or call 01545 572147.

NRW (Natural Resources Wales)
Contact NRW at enquiries@naturalresourceswales.gov.uk, call 0300 065 3000 or visit their website http://naturalresourceswales.gov.uk.

Welsh Kite Trust
Email wjmwales@gmail.com, call 01545 590153 or visit their website http://www.teifiriverstrust.com/?page_id=617.

Wildlife Trusts
Wildlife Trust of South and West Wales
Call 01656 724100 or visit their website http://www.welshwildlife.org/contact-us/.

Local Record Centre
West Wales Biodiversity Information Centre
Call 01994 241468 or visit their website http://www.wwbic.org.uk

5. Useful documents, links and references

Bat Conservation Trust (2012) Bat Survey Good Practice Guidelines

BSI (2013) British Standards for Biodiversity: Code of Practice for Planning and Development (BS42020:2013)

Ceredigion County Council (2015) *Local Development Plan Energy Supplementary Planning Guidance*

Ceredigion County Council (2015) *Local Development Plan Nature Conservation Supplementary Planning Guidance*

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

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SNH (2012) Assessing The Cumulative Impact Of Onshore Wind Energy Developments [Available online] http://www.snh.gov.uk/docs/A675503.pdf

SNH (2014) *Recommended bird survey methods to inform impact assessment of onshore wind farms* [Available online] http://www.snh.gov.uk/docs/C278917.pdf

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