

# **Ceredigion**

**Local Development Plan  
2007 - 2022**

## **Nature Conservation and Small Scale Hydropower Schemes**

### **Help Sheet**



## Contents

|   |    |
|---|----|
| 1. Introduction   | 1  |
| 2. Survey Requirements                                  | 4  |
| 3. Avoidance, Mitigation, Compensation and Enhancements | 8  |
| 4. Who to contact                                       | 10 |
| 5. Useful documents, links and references               | 11 |



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 micro hydro scheme application, with regards to nature conservation. This includes a broad guide on the survey requirements. However, it is advised developers speak to the Local Authority (LA) at pre-application stage to get specific pre-application advice.**
  - 1.1.2 The guidance enables developers to meet the County 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 small scale hydro schemes and therefore should be read in conjunction with the Nature Conservation SPG which provides more generic advice.
  - 1.1.4 It should be also noted that, in addition to planning consent, abstraction/impoundment licences will be required from NRW, as well as Flood Defence Consent to work within the river/within 7m of the river. NRW have produced guidance (NRW, n.d<sup>a</sup>, NRW, n.d<sup>b</sup>) which will be required to be met in addition to this Help Sheet. It is advised that you also contact NRW using their pre-application service early on in the design process. Visit the [NRW website](#)<sup>1</sup> for more information.
  - 1.1.5 If, however, the scheme is not in a main river, the Coast and Rivers Section of the LA must be contacted to obtain an Ordinary Watercourse Consent to place a structure within the river/stream. Please contact Head of Assets and Transportation, Ceredigion County Council Coast and River Section at [hpw@ceredigion.gov.uk](mailto:hpw@ceredigion.gov.uk) for advice or for a copy of the application form with guidance notes. It is advised to discuss your proposal with the Authority before commencement in order to ensure that the proposed works can be assessed to determine whether they will cause or exacerbate an existing flooding problem, or adversely affect the local environment, fisheries and/or wildlife.
  - 1.1.6 Please see **Figure 1** for an outline of the process with regards to ecological requirements.

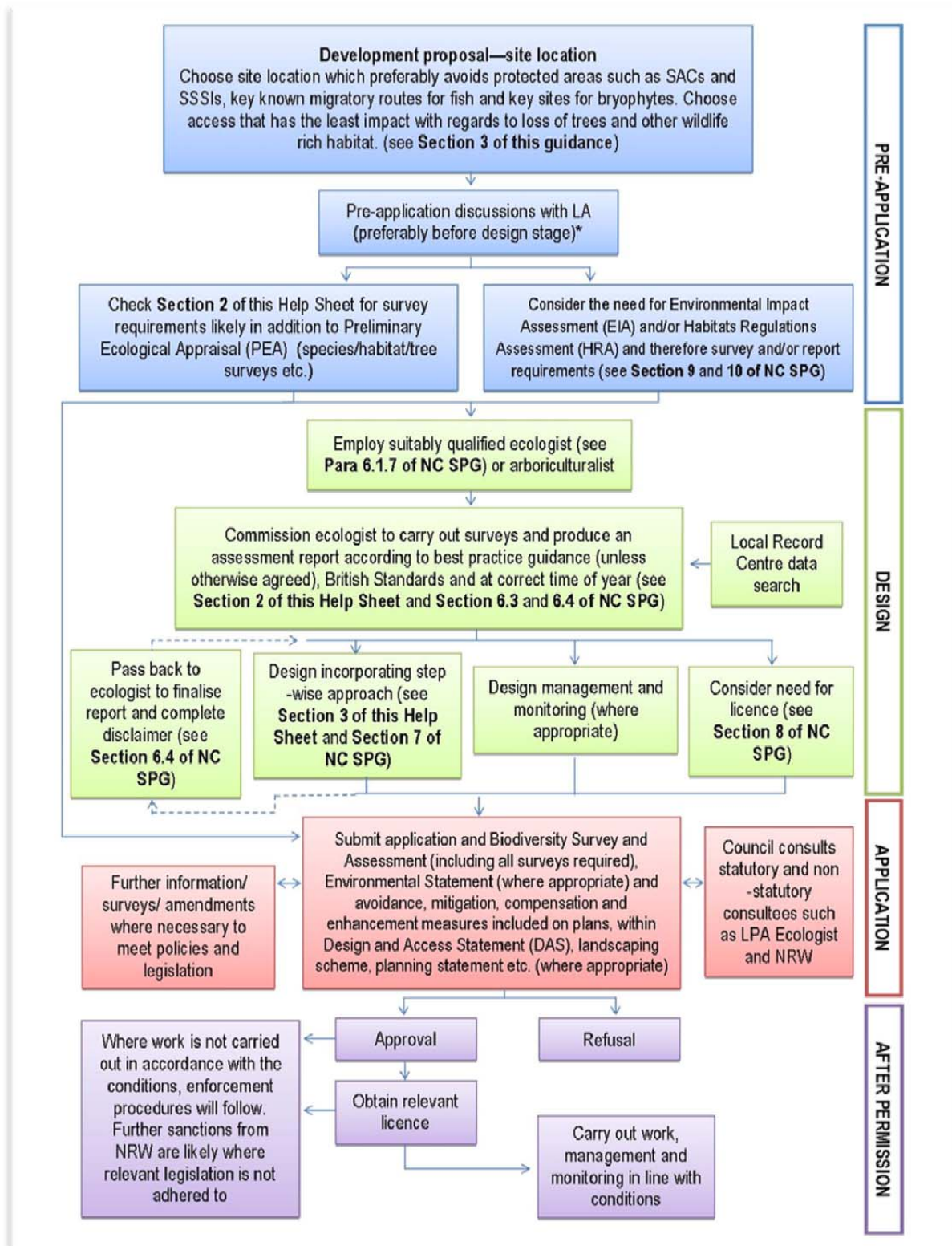
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<sup>1</sup> <http://cyfoethnaturiolcymru.gov.uk/apply-and-buy/water-licences-discharges/water-abstraction-and-impoundment-licensing/hydropower/hydropower-how-to-apply-for-your-hydropower-scheme/?lang=en>

**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 small scale hydro scheme applications 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. Ideally surveys should satisfy all necessary consent and licensing requirements i.e. requirements for planning permission and for abstraction/impoundment licenses (provided by NRW).
- Pre-application advice with the Local Planning Authority (LPA), including the LA 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.
- Some surveys and mitigation can only be carried out in certain seasons, 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, timings etc.) will be covered by planning 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 a financial contribution for management/purchase of land.
- 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 small scale hydro schemes.



\* The LA's main responsibilities, with regards to planning, are the impacts on the non-depleted reach, the construction impacts, access impacts, cabling etc. NRW's main responsibilities are impacts of the abstraction/impoundment namely impacts on the ecology of depleted reach, barriers to fish migration, impacts on bryophytes.

There are some crossovers where hydro schemes are within or may impact European Protected Sites due to the additional assessments required with these schemes.

## 2. Survey Requirements

2.1.1 All Small Scale Hydro Development will be required to meet National policies (relevant policies within Planning Policy Wales (PPW) and Technical Advice Note (TAN) 5 and TAN 8), Local policies (Ceredigion Local Development Plan (LDP) Policies DM14 and DM15) and the British Standards for Biodiversity: Code of Practice for Planning and Development (BS42020:2013), as well as other relevant requirements of the British Standards for Trees in Relation to Design, Demolition and Construction (BS5837:2012), Hedgerow Regulations 1997 etc. The Council is also required to meet its duties under the Conservation of Habitats 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 legal duties, a Preliminary Ecological Appraisal (PEA) of the site and immediate surroundings will be required to support any proposed small scale hydro application, regardless of size and location.

2.1.3 Further surveys may be required dependent on the nature, scale and location of the small scale hydro and the sensitivity of the local environment. It is recommended survey requirements are discussed and agreed with the LA/NRW before they are carried out to avoid later delays.

2.1.4 In general, hydro schemes are also required to meet the Water Framework Directive 2000, Eel Directive 2007 and Environment Act 1995, however these aspects are mainly dealt with through the abstraction/impoundment licence process. In order to apply for an abstraction/impoundment licence, NRW may require further information than that required here. Please contact NRW for further information. Where possible, it is advised that all survey work for the LA and NRW is combined in order to reduce costs and time delays.

2.1.5 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 Nature Conservation Supplementary Planning Guidance (NC SPG) (to be available on the Ceredigion County Council website [www.ceredigion.gov.uk](http://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 small scale hydro and any works related to the development such as access, access improvements (including hedgerow removal), cable laying,



concrete mixing, 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 Environmental and Ecological Management (CIEEM) website<sup>2</sup> and on the British Hydropower Association web site<sup>3</sup>. 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.

| Desk Based Study Requirements   |
|---|
| Statutory and non-statutory designated sites within 2 km of the proposed development;   |
| River/marine statutory and non-statutory designated sites upstream/downstream of the proposed development;  |
| Records of breeding salmonids and eels at or upstream of the site (NRW)*  |
| Listing of any species under Section 42 of NERC 2006 and in the relevant LBAP (protected and notable (including priority) species records) within 2km. Also list current known status of species if known.* |
| Location of other water features within 200m  |
| Small scale hydro schemes on the same river system 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 **hydro scheme site plus a 250m buffer** and the **other areas such as the location of the outlet and inlet of water, the stretch of depleted volume of water, the location of the pipe/tailrace, cabling, the access track and location of the turbine house etc. plus a 100m buffer.**

2.4.2 This should be extended to include:

<sup>2</sup> <http://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea->

<sup>3</sup> <http://www.british-hydro.org/>

## Field Survey Requirements

The value of the habitat and surrounding habitat including any areas affected by the location of the outlet and inlet of water, the stretch of depleted volume of water, the location of the pipe/tailrace, the access track and location of the turbine house

Hedgerow value as defined under the Hedgerow Regulations 1997, not just Phase 1

Signs of use by protected and priority species e.g. badgers, otters, water voles 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 potentially affected by the proposed small hydropower development shall be externally, and if possible, internally assessed for potential roosting bats in accordance with Bat Conservation Trust 2012 Guidelines and Mitchell-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 or their roots undermined or damaged.

## 2.5 Report

2.5.1 The report 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 hydro schemes 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, fish, otters etc.)
- Habitat loss
  - E.g. elver habitat, salmonid barriers to migration, birds due to disturbance from habitat, loss of bat tree roosts, otter holt destruction, badger sett destruction, loss of reptile basking/hibernacula, amphibian feeding areas, bird breeding sites etc., loss of BAP habitat, depletion of water flow impacting water ecology of affected or nearby stream/river or lake.
- Disturbance

- E.g. bats/birds from habitat, breeding birds during nesting, breeding badgers, water voles, otters, salmonids during spawning
- Displacement
  - E.g. Salmonids from spawning sites
- Death to individual species
  - E.g. . killing/injuring of reptiles, killing/injuring of badgers, killing of fish during construction/hydro operation, killing/injury of otters, removing lichens, bryophytes and mosses
- Cumulative impacts
  - From all of the above

## **2.6 More detailed surveys and further information**

2.6.1 Depending on the location (including protection), size and details of the scheme, more detailed surveys may be required in order to determine the full extent of the above impacts.

2.6.2 Determination of impacts and required further survey work (from the developer) with regards to the depleted stretch and function of the turbine, including migratory salmonids, eels/elvers, bryophytes and river invertebrates, must be discussed and agreed with NRW (although please note where European protected sites are affected, the LA may require further information with regards to these aspects). Agreements with NRW on level of survey and outcome of the assessment must be included with the reports. See NRW guidance for more information.

2.6.3 The LA is responsible for the determination of impacts and requesting further survey work from the developer for all other aspects including impacts of the construction, access, cable laying etc. and therefore these must be discussed and agreed with the LA.

2.6.4 A Pollution Prevention Statement will be required to demonstrate how the water course(s) and surrounding habitat will be protected from pollution and sedimentation.

### 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 small scale hydro scheme, in order to try to reduce risks to wildlife, the following should be incorporated within the design and choice of location. This may reduce the amount of mitigation and survey effort required, and in some cases ecological objection to the hydro scheme. Most of these elements can be determined from the PEA survey, some elements would require further survey effort.

- **Small scale hydro schemes should be based in stretches of low ecological value and any cabling, access tracks or other requirements associated with the scheme, 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. In particular, sites which are within protected sites are best avoided as well as important migratory stretches for salmonids and eels, and nursery grounds for eelers.
- **Site the development away from otter holts or resting places.** Advice from an otter specialist should be sought if otter holts or resting places are found at/near to the proposed site.
- **Site the development away from water vole burrows and feeding habitat.** Advice from a water vole/small mammal specialist should be sought if signs of water voles are found at/near to the proposed site.
- **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 to interfere with badger setts for the purposes of development 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, large or small, to escape.
- **Construction should be avoided when brown hares are breeding** (presence determined by pre-construction survey).
- **Construction of the scheme should be carried out outside of bird breeding season.** This would usually be March to August inclusive but may be February to June inclusive for red kites. Where this is proposed to not be the case, breeding bird surveys will be required including red kite nest searches within 600m. Depending on location (e.g. dense

woodland), bird breeding surveys may need to be extensive. In most locations, it is likely that bird breeding season will need to be avoided.

- **Hydro schemes should not cause an obstruction to salmonid and other fish migration.** See NRW guidance for further information. Please note further requirements may be necessary where the location is a protected site of which migratory fish are a feature.
- **Where fish are or are likely to be present, internal stream works should be carried out outside of fish migration and spawning (15 October and 15 April) inclusive.**
- **Method of works will need to prevent pollution and minimise sedimentation to the water course.** A Pollution Prevention Statement will need to be produced and incorporated into Construction Method Statement

### **3.3 Compensation**

- 3.3.1 Some habitat which is affected may be able to be recreated or alternative compensatory measures incorporated. For example, if there is no other access option other than the removal of a small number of individual trees, a compensatory planting scheme elsewhere must be included and implemented, including rabbit guards and stock fencing and avoiding badger setts, marshy grassland etc. Areas proposed for compensation must be incorporated within the PEA and on the plans.

### **3.4 Enhancements**

- 3.4.1 Ecological enhancements will be required with all small scale hydro applications in line with LDP Policies DM06 and DM15 as well as TAN 5. The most appropriate enhancements will be site dependent. Enhancements could include creation of reptile hibernacula, positive ditch management, pond creation, additional hedgerow/tree planting, alternative management regimes of land/boundary features, bat/bird boxes, otter holts, reduced grazing, fencing out areas of upland etc.

### **3.5 Monitoring**

- 3.5.1 Where it is appropriate, monitoring may be required following the development of the hydro scheme. For example this may be to determine whether fish are able to pass or impacts to otters. In some cases it may be more appropriate to add a condition that requires the access of the site to the LA or a person appointed by the LA 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](mailto:ecology@ceredigion.gov.uk) or call 01545 572147.

##### **NRW (Natural Resources Wales)**

Contact NRW at [enquiries@naturalresourceswales.gov.uk](mailto:enquiries@naturalresourceswales.gov.uk), call 0300 065 3000 or visit their website <http://naturalresourceswales.gov.uk>.

##### **Rivers Trusts**

###### **Teifi Rivers Trust**

Email [wjmwales@gmail.com](mailto:wjmwales@gmail.com), call 01545 590153 or visit their website [http://www.teifirivertrust.com/?page\\_id=617](http://www.teifirivertrust.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)

British Hydropower Association (2012) Mini Hydro Guide. [Available online]  
[http://www.british-hydro.org/Useful%20Information/mini\\_hydro\\_guide](http://www.british-hydro.org/Useful%20Information/mini_hydro_guide)

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](http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf)

Conservation of Habitat and Species Regulations. (2010).

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<http://jncc.defra.gov.uk/>

Mitchel-Jones, A. and McLeish, A. (2004) *Bat Workers Manual*. [Available online]  
<http://jncc.defra.gov.uk/page-2861>

Natural Environment and Rural Communities Act. (2006).

Natural Resources Wales (n.d.<sup>a</sup>). Hydropower Guidance Note HGN 2 Hydropower Flow standards. [Available online]  
<http://naturalresourceswales.gov.uk/content/docs/pdfs/apply-and-buy/hydropower-guidance/hgn-2-hydropower-flow-standards.pdf?lang=en>

Natural Resources Wales (n.d.<sup>b</sup>). Hydropower Guidance Note: HGN 6 Nature Conservation, Heritage, Amenity and Landscapes. [Available online]  
<http://naturalresourceswales.gov.uk/content/docs/pdfs/apply-and-buy/hydropower-guidance/hgn-6-nature-conservation-heritage-amenity-and-landscape.pdf?lang=en>

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Wildlife and Countryside Act. (1981). (*as amended*).