

## 2.0 ASSESSMENT METHODOLOGY

### OBJECTIVES

- 2.1 The principal objective of the EIA process is to provide the Local Planning Authority (in this case, West Devon Borough Council), statutory consultees and other interested parties with a clear and concise technical document that provides sufficient information on the proposed development and its likely environmental effects to assist in making a decision on whether planning permission should be granted.
- 2.2 There are three basic steps used in the EIA process in order to meet this objective, which are as follows:
- establish existing baseline environmental conditions including any current environmental problems. This task is divided into two phases:
    - collection and review of existing data relating to the application site, including consultation with statutory and non-statutory bodies; and
    - the enhancement of existing data, where necessary, with information collected through further site investigation or survey.
  - identify, predict and assess the significance of the likely environmental effects (both beneficial and adverse), which could be expected as a result of the development proposals, covering those environmental issues that were considered to be potentially significant during scoping discussions with statutory consultees; and
  - design mitigation and management measures, which would be adopted to prevent, reduce or remedy any significant adverse effects. Consideration is also given to enhancement measures that would be implemented to promote positive environmental benefits as a part of these proposals.

### LEGISLATIVE BACKGROUND

- 2.3 This EIA has been carried out in accordance with the *Town and Country Planning (Environmental Impact Assessment) Regulations 2011 [Statutory Instruments 2011 No. 1824]* (hereafter referred to as the EIA Regulations 2011) and associated guidance set out in the former Department of the Environment, Transport and the Regions (DETR) Circular 02/99. The EIA has also taken into account guidance provided within the former DETR's document 'Environmental Impact Assessment – A Guide to Procedures' (2000), and the Institute of Environmental Management & Assessment (IEMA) 'Guidelines for Environmental Impact Assessment' (2004).
- 2.4 The EIA Regulations 2011 implement European Council Directive 85/337/EC, as amended by European Council Directive 97/11/EC and Article 3 of Council Directive 2003/35/EC (henceforth referred to as the 'EIA Directive').

- 2.5 The EIA Regulations 2011 require that before consent is granted for certain types of development, an EIA must be undertaken. The EIA Regulations 2011 set out the types of development which must always be subject to an EIA (Schedule 1) and developments which may require assessment, if they are likely to give rise to significant environmental effects (Schedule 2).
- 2.6 'Schedule 2 development' is defined in Part 1 (2) the EIA Regulations 2011 as that where '*(a) any part of the development is to be carried out in a sensitive area; or (b) any applicable threshold or criterion in the corresponding part of Column 2 of that table is respectively exceeded or met in relation to that development*'.
- 2.7 The proposed development at Wreys Barton Farm falls within the criteria set out in Schedule 2 (3)(ii) of the EIA Regulations 2011, as follows:
- 'Installations for the harnessing of wind power for energy production (wind farms)', where*  
*'...(ii) the hub height of any turbine or height of any other structure exceeds 15 metres.'*
- 2.8 Specific technical guidance has been used, where appropriate, in the assessment of the impacts of the proposed development on several aspects of the environment. These include the use of British Standard methodologies and adherence to the policies set out in the National Planning Policy Framework (NPPF) and associated Planning Practice Guidance (PPG). A summary of the relevant legislation and planning policy (national, regional and local) is provided in Chapter 3.0.
- 2.9 A detailed description of the assessment methodology, including the specific standards and guidelines which have been utilised during the preparation of this ES, is given at the beginning of each technical chapter (i.e. Chapters 6.0-11.0).

## **ASSESSMENT CRITERIA**

- 2.10 In accordance with best practice guidance, a number of criteria have been used to determine whether or not the potential effects of the proposed development are considered to be significant, as follows:
- international, national and local standards;
  - relationship with planning policy;
  - sensitivity of the receiving environment;
  - reversibility and duration of effect;
  - inter-relationship between effects; and
  - the results of consultation.
- 2.11 The effects that were considered to be significant prior to mitigation are identified within the ES. The significance of these effects reflects judgement on the importance or sensitivity of the affected receptor(s) and the nature and magnitude of the predicted changes. For example, a large adverse impact on a feature or site of low importance will be of lesser significance than the same impact on a feature or site of high importance.

- 2.12 Environmental effects may be both adverse (negative) or beneficial (positive). Quantification of these effects, particularly in relation to comparative assessment between environmental disciplines, requires consistent assessment criteria to be used throughout.
- 2.13 The criteria used in this assessment are generally as follows:
- Major Beneficial or Major Adverse effect – where the development would cause a significant improvement (or deterioration) to the existing environment;
  - Moderate Beneficial or Moderate Adverse effect – where the development would cause a noticeable improvement (or deterioration) to the existing environment;
  - Minor Beneficial or Minor Adverse effect – where the development would cause a barely perceptible improvement (or deterioration) to the existing environment; and
  - Negligible – no discernible improvement or deterioration to the existing environment.
- 2.14 It should be noted, however, that certain technical studies (e.g. landscape and ecology) have slightly different assessment criteria which meet current best practice guidance for that discipline. For the sake of clarity, the specific significance criteria used in each technical assessment are set out at the beginning of the respective technical chapters in this ES.

## **SCOPE OF THE EIA**

- 2.15 WDBC adopted an EIA Screening Opinion on 8<sup>th</sup> September 2014 (a copy of which is given as Appendix 1.2). Based on the content of the Council's Screening Opinion and experience on the scope of similar schemes in Devon and Cornwall, the scope of this ES was defined as the topics listed in Table 1.1.
- 2.16 The findings of the EIA process, including details of any necessary mitigation measures to avoid, reduce or off-set adverse environmental effects of the proposed wind turbine are presented in the remainder of this ES.

## **CUMULATIVE SITES**

- 2.17 A search of WDBC, Torridge District Council and Cornwall Council's planning register was undertaken to identify a list of turbines for inclusion in a cumulative assessment. The search was limited to a radius of 10 km for other turbine applications and the list submitted with the EIA Screening Request is provided as Appendix 2.1.
- 2.18 WDBC also provided one further cumulative turbine within this radius to consider (located within the Torridge District Council boundary) and the details are provided below:
- Rixon Cross Farm, Broadwoodwidge – operational 500 kW turbine, 72 m to blade tip, located approximately 2.2 km to the north-west.

## DESIGN OF THE WIND TURBINE SCHEME (INCLUDING ALTERNATIVES)

- 2.19 The design of the wind turbine has been an iterative process which has taken account of environmental constraints by the technical specialists throughout the EIA process in order to minimise any adverse environmental effects of the project.

### 'Do Nothing' Scenario

- 2.20 As reported in RegenSW's Renewable Energy Progress Report 2014, the South West has nearly 1.2 GW of renewable energy capacity which supplies 8.3% of the South West electricity. However, the South West is not on track to meet the Governments target of 15% of South West energy from renewable sources by 2020.
- 2.21 Therefore, the regional target is still yet to be achieved and, for the purpose of this EIA, a 'do nothing' scenario is discounted. This is because the proposed wind turbine will contribute significantly (i.e. 0.5 MW) towards the South West's renewable electricity production and, for the concomitant positive environmental benefits that this would have in terms of reducing emissions of greenhouse gases (GHGs) and the negative effects of climate change/global warming, as well as contributing to meeting the minimum national target of 15% renewable energy supply by 2020.

### Alternatives

- 2.22 The EIA Directive and the EIA Regulations 2011 do not specifically require the assessment of alternatives. The Applicant has chosen this location at Wreys Barton Farm as the land owner has willingly offered use of the site for its suitability (in terms of wind speeds, topography and distance from sensitive receptors) for a wind turbine, whilst being able to maintain the current level of agricultural use and productivity.
- 2.23 Whilst the consideration of suitable alternative sites is limited by the supply of suitable land being offered by land owners for renewable electricity generation (i.e. no other suitable sites are currently available to the Applicant in the Wreys Barton Farm area), the IEMA Guidelines for Environmental Impact Assessment (2004) describe how consideration of other 'alternatives' is equally important.
- 2.24 To this end, the Applicant has considered alternative locations for the wind turbine within the site boundary and has opted for the final location as it maximises the harnessing of available wind energy, whilst being located at a suitable distance away from sensitive receptors, including residential properties, hedgerows for breeding birds and foraging bats and public rights of way, including footpaths, bridleways and highways.
- 2.25 The Applicant has also considered alternative types of wind turbine but selected the EWT Directwind 54\*500 model for its productivity, balanced with its manageability (i.e. its ability to control 'cut in speeds' etc) in order to reduce any adverse environmental effects.

## PROVISIONAL WIND TURBINE CUMULATIVE LIST

**Wind Turbine Reference:** C1343 – Wreys Barton Farm

**Methodology:** Planning Search on 28<sup>th</sup> May 2014

Application Reference	Details	Status
<b><i>West Devon Borough Council</i></b>		
<b>00300/2013</b>	SX 38700 87200 – 77 m to tip – 5.1 km to the west.	Approved at Appeal
<b>00063/2013</b>	SX 37785 85585 – 77 m to tip – 6.3 km to the south-west-west.	Approved at Appeal
<b>00118/2010</b>	SX 37251 86495 – 19.8 m to tip – 6.6 km to the south-west.	Approved
<b>01243/2013</b>	SX 42098 80894 – 35 m to tip – 6.9 km to the south.	At Appeal
<b>11993/2008</b>	SX 40226 80268 – 15 m hub height – 8 km to the south-west.	Approved
<b>00785/2013</b>	SX 47837 95632 – 19.8 m to tip – 9 km to the north-north-east.	Approved
<b>00225/2014</b>	SX 48125 96572 – 19.4 m to tip – 9.9 km to the north-east.	Pending Consideration
<b><i>Torridge District Council</i></b>		
<b>1/1049/2013/FUL</b>	SX 38777 90042 – 45.6 m to tip – 5.6 km to the north-west.	Pending Consideration
<b>1/0922/2012/FUL</b>	SX 41415 95641 – 84 m to tip – 8.4 km to the north-north-west.	At Appeal
<b>1/1171/2012/FULM</b>	SX 36700 93400 – 6 x 115 m to tip – 9.1 km to the north-west.	Pending Consideration
<b>1/0001/2013/SCR</b>	SX 34707 91112 – 2 x 35 m to tip – 9.7 km to the north-west.	Screening Opinion
<b><i>Cornwall Council</i></b>		
<b>PA12/07744</b>	SX 35078 82940 – 77 m to tip – 9.9 km to the south-west.	Screening Opinion