

Park Spring Wind Farm

Design and Access Statement

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1 INTRODUCTION

- 1.1.1 This Design and Access Statement (DAS) has been prepared by Parsons Brinckerhoff Ltd on behalf of EDF Energy Renewables Limited (EDF ER). It is submitted in support of an application for planning permission for the erection of a three turbine wind farm development, together with associated ancillary infrastructure, to be located adjacent to Park Spring Road, Little Houghton, Barnsley (to be known as "Park Spring Wind Farm" or "the Development").
- 1.1.2 This DAS is part of a suite of application documents which are all inter-related and should be read together to gain a full understanding of the proposed Development. These documents comprise:
- Environmental Statement Non-Technical Summary.
 - Environmental Statement Volume 1 (Main Document).
 - Environmental Statement Volume 2 (Appendices).
 - Environmental Statement Volume 3 (Figures).
 - Planning Statement.
 - Planning Forms.
 - Design and Access Statement.
 - Statement of Community Involvement.
- 1.1.3 This DAS has been prepared in accordance with Circular 01/06 'Guidance on changes to the Development Control System' (2006). This Circular advises that a DAS should include details on the amount, use, layout, scale, landscaping, appearance and access of the proposed development.
- 1.1.4 This DAS has also been written in accordance with the best practice guidelines found in 'Design and Access Statements: how to write, read and use them' (CABE, 2010).

2 THE PROPOSED DEVELOPMENT

2.1.1 The Environmental Statement (ES) (Volume 1) provides a detailed description of the proposed wind farm. However, in brief, the proposed Development comprises:

- Three wind turbines (2 MW installed generating capacity each) with maximum height to blade tip of up to 126.5 m.
- New access tracks (approximately 900 m in length).
- Upgraded existing access tracks (approximately 550 m in length).
- Crane hardstandings.
- Control Building (approximate footprint of 48m²).
- Temporary construction compound.
- Temporary blade laydown areas.

2.1.2 The permanent wind farm project footprint would occupy approximately 0.98 hectares (ha) situated within a site that covers some 90.4 ha. During the construction phase an additional 0.42 ha would be temporarily required for laydown and working areas. The planning application boundary which allows for blade oversail and micro-siting covers some 5.43 ha.

3 DESIGN PRINCIPLES AND CONCEPTS

3.1 Introduction

3.1.1 Guidance on changes to the Development Control System (2006) requires a description of:

- The **use** of the proposed development.
- The **amount** of development proposed.
- The **layout** of the proposed development.
- The **scale** of proposed development.
- Proposed **landscaping**.
- Proposed **appearance**.
- The proposed **access**.

3.1.2 Following a careful site selection process and subsequent environmental and technical surveys, EDF ER has concluded that the Park Spring site is a good location for a wind farm development, for the following reasons:

- **Wind Resource** - The siting of wind turbines is constrained by the need for a location with sufficient wind resource to allow the project to operate in a technically and commercially viable manner. Indications from an on-site weather mast show that the wind speeds are viable, and are thus suitable for a wind farm development.
- **Distance From Housing** - There are no residential properties within the site boundary and the nearest residential property is located over 750 m from the nearest turbine location. An assessment of the impact upon residential properties has included noise, shadow flicker and residential amenity surveys, with no unacceptable impacts predicted at the nearest receptors.
- **Existing land use and designation** – The proposed turbines will be located on privately owned, agricultural land, comprising arable fields separated by hedgerows and woodlands. The site is not the subject of any national or international ecological designations.
- **Ecological and ornithological factors** – Surveys have been carried out for avian and protected species, with the results reported in the ES. The studies carried out show that there will be no unacceptable impacts upon the ecological and ornithological features of the site and surroundings.
- **Cultural heritage** - There is a limited potential that archaeological remains may be present at the site and therefore a watching brief will be undertaken during the construction phase of the development, with any archaeological remains excavated and recorded. No unacceptable indirect impacts upon cultural heritage assets are predicted.
- **Visual Impact** – A full assessment of the potential visual impacts on surrounding localities and nearby sensitive receptors has been undertaken and results reported in the ES. Although impacts were identified for receptors in the area, it is not considered that these are unacceptable.
- **Availability of Electrical Connections** – Yorkshire Electricity Distribution Ltd (YEDL) have been consulted to determine the best method of exporting

electricity from the site. The consultation response indicated that viable grid connection options are available.

- **Telecommunications Links Across the Site** – Wind farm projects have the potential to impact on telecommunications signals if they are in close proximity to these links. Consultations have been held with relevant telecommunications companies and it has been concluded that this project will not impact any of these communication links.
- **Aviation and Air Defence** - Wind turbines have the potential to act as a physical obstruction to aviation because of their height. They can also present an obstruction to radar, through generation of unwanted radar returns; partially due to height but particularly due to the rotating blades. As part of the ES, informal pre-planning consultations have been held with the Civil Aviation Authority (CAA), Ministry of Defence (MOD), National Air Traffic Service En Route Ltd (NERL), Robin Hood Airport Doncaster-Sheffield and Leeds Bradford International Airport. No objections have been received.
- **Accessibility and Rights of Way** – There are a number of public rights of way across the site, footpaths, bridleways and permissive paths. There will be a requirement for temporary closures of public rights of way during construction activities, but this would be on a temporary basis for safety purposes and the rights of way would be in use during the operation of the Development.
- **A Site Area Sufficient to Accommodate a Viable Project** - The area of land available is considered to be sufficient to accommodate three wind turbines with a tip height of up to 126.5 m.

3.1.3 Based on the above, and other assessments as reported in the ES, it has been concluded that the proposed site at Park Spring is suitable for the siting of a three turbine wind farm development.

3.2 Use

3.2.1 The wind farm would comprise three wind turbines, each with an anticipated installed generating capacity of 2 MW. The Development would therefore generate 6 MW of renewable energy to be exported to the grid network.

3.2.2 Agricultural activities would continue on site as the wind turbines and associated infrastructure would utilise only 0.98 ha out of the 90.4 ha site.

3.3 Amount and Scale

3.3.1 The application proposes the erection of three wind turbines (0.053 ha) together with a control building (0.0048 ha), crane hardstandings (0.27 ha), and new and upgraded access tracks (0.65 ha). The permanent land-take totals 0.98 ha. Additional temporary land-take is required during the construction phase, this includes a construction compound (0.25 ha), blade laydown areas (0.14 ha) and a turning circle (0.031 ha). The temporary land-take totals 0.42 ha.

3.3.2 It is proposed that each turbine will have a maximum height to blade tip of 126.5 metres. The tower structure will measure approximately 5 metres at its base.

3.3.3 This size of turbine has been identified as being the most appropriate for the site as it is considered to strike an acceptable balance between the need to maximise energy generation whilst minimising impacts on sensitive environmental receptors. In terms of energy generation, turbine selection was informed by an analysis of data collected from the on-site meteorological mast.

3.4 Layout

3.4.1 The proposed site layout, subject to micro-siting, is shown in Figure 3.2 of Volume 3 of the ES. This layout plan shows the position of the wind turbines, crane hardstanding, access tracks and the control building.

3.4.2 The proposed Park Spring wind farm layout was subject to an iterative design process. As constraints were highlighted throughout the development stage, the design of the scheme altered to ensure that the proposal was refined to mitigate potential impacts wherever possible. Design changes made as a result of constraints identified throughout the development process are considered to be 'embedded mitigation'.

3.5 Landscaping

3.5.1 This planning application is accompanied by a landscape and visual impact assessment which is included in the ES (Chapter 6, Landscape and Visual Impact).

3.5.2 The gapping up and planting of new hedgerows is proposed as part of the ecological enhancement works as detailed in Chapter 9, Ecology, of the ES.

3.6 Appearance

3.6.1 The proposed turbines will comprise a tubular tower structure, a rotor comprising of three blades, a hub and nacelle.

3.6.2 All wind turbine component elements will be finished in either white or pale grey with the precise colour specification to be agreed in consultation with Barnsley Metropolitan Borough Council (BMBC).

3.6.3 The precise turbine model to be used on site will be selected post planning.

3.6.4 It is intended that materials specification for the control room will be agreed in consultation with BMBC.

4 THE ACCESS COMPONENT**4.1 Consultation**

- 4.1.1 Consultation has been undertaken with BMBC, both through the formal Scoping process and through subsequent correspondence. The Highways Agency and Department for Transport were also consulted on the proposal through the Scoping process. These consultations have confirmed that the proposed access route to site is acceptable in principle. The access route and impacts of the vehicle generation as a result of the development are discussed in detail in ES Chapter 13, Transport and Traffic.

4.2 Access route

- 4.2.1 The main turbine components are expected to be manufactured overseas and are likely to be shipped to a UK port from where they can be transported by road to the proposed site. The larger turbine components (abnormal loads) will be brought from the motorway network to the site via the A1 (M), the A635 and the A6195 (Park Spring Road) to the site entrance. Approximately twenty-seven abnormal loads are expected over the construction period for the delivery of the blades, tower parts and nacelles.
- 4.2.2 The exit point from the A6195 varies for normal and abnormal load deliveries. Using temporary traffic lights, the small number of abnormal load deliveries will exit the A6195 when heading northbound onto the existing slip road. Normal load deliveries will continue northbound along the A1695 before doubling back at the Grimethorpe Colliery Roundabout, travelling southbound along the A6195 and turning onto the existing slip road.
- 4.2.3 Other construction traffic, including construction staff, are likely to approach the site along the normal load access route.
- 4.2.4 Peak traffic movements will occur during the delivery of aggregate, for the construction of the on-site access tracks, and the delivery of the construction equipment. The number of vehicles generated as a result of the construction of the development is expected to be of the order of 2021 vehicle movements over the construction period of an estimated 6-9 months duration. This amounts to an average of approximately 15 vehicle movements per working day. This represents an insignificant increase to the existing traffic levels in the vicinity of the proposed site.
- 4.2.5 All access routes will be agreed with the Highways Agency and BMBC prior to the commencement of construction.
- 4.2.6 The design of the wind farm layout has used existing tracks wherever possible. It is proposed that 550 m of existing tracks will be upgraded, and 900 m of new access tracks will be constructed. The upgraded and new access tracks would be a nominal width of 5 m.
- 4.2.7 The access tracks will be constructed from compacted stone with a thickness of approximately 750 mm. This specification is considered appropriate to facilitate construction of the development and its maintenance during operation. A typical cross section of an access track is shown in Figure 3.4 of Volume 3 of the ES.

4.3 Public and other access

- 4.3.1 The operational wind farm would not be specifically open to the general public, there is therefore no public or disabled access intended to the wind farm site.
- 4.3.2 While it would be possible for members of the public to access the site utilising the public right of way network, it is not considered that the requirements of inclusive access apply to this development.
- 4.3.3 There will be two main groups of people accessing the wind farm project site; construction workers during the construction process, and maintenance engineers during the operational phase. During construction, the site would be accessed from Park Spring Road (A6195). Access tracks would then be constructed between the site entrance to the three turbines and the control building. The layout of the access tracks have been designed so that they are sufficient to deliver large turbine components in and out of the site with minimal difficulty. The same access tracks would remain in place following construction and would be used by the maintenance engineers on routine visits.
- 4.3.4 There are not anticipated to be any health and safety considerations regarding access to the site during construction or operation, other than large, moving vehicles. Where large deliveries are being made to the site, banksmen and temporary traffic lights to manage traffic flow will be used for manoeuvres. The access tracks have been designed so as to allow good access for all vehicles present on site.