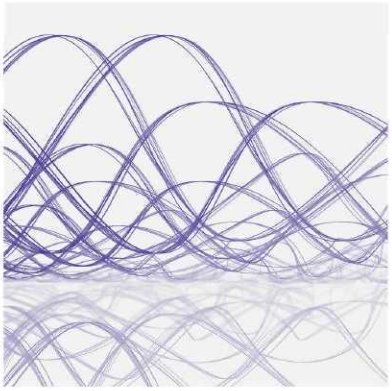










Treading Wind Farm

engena

prepared on behalf of

WindVentures

January 2011

Design and Access Statement

DESIGN AND ACCESS STATEMENT

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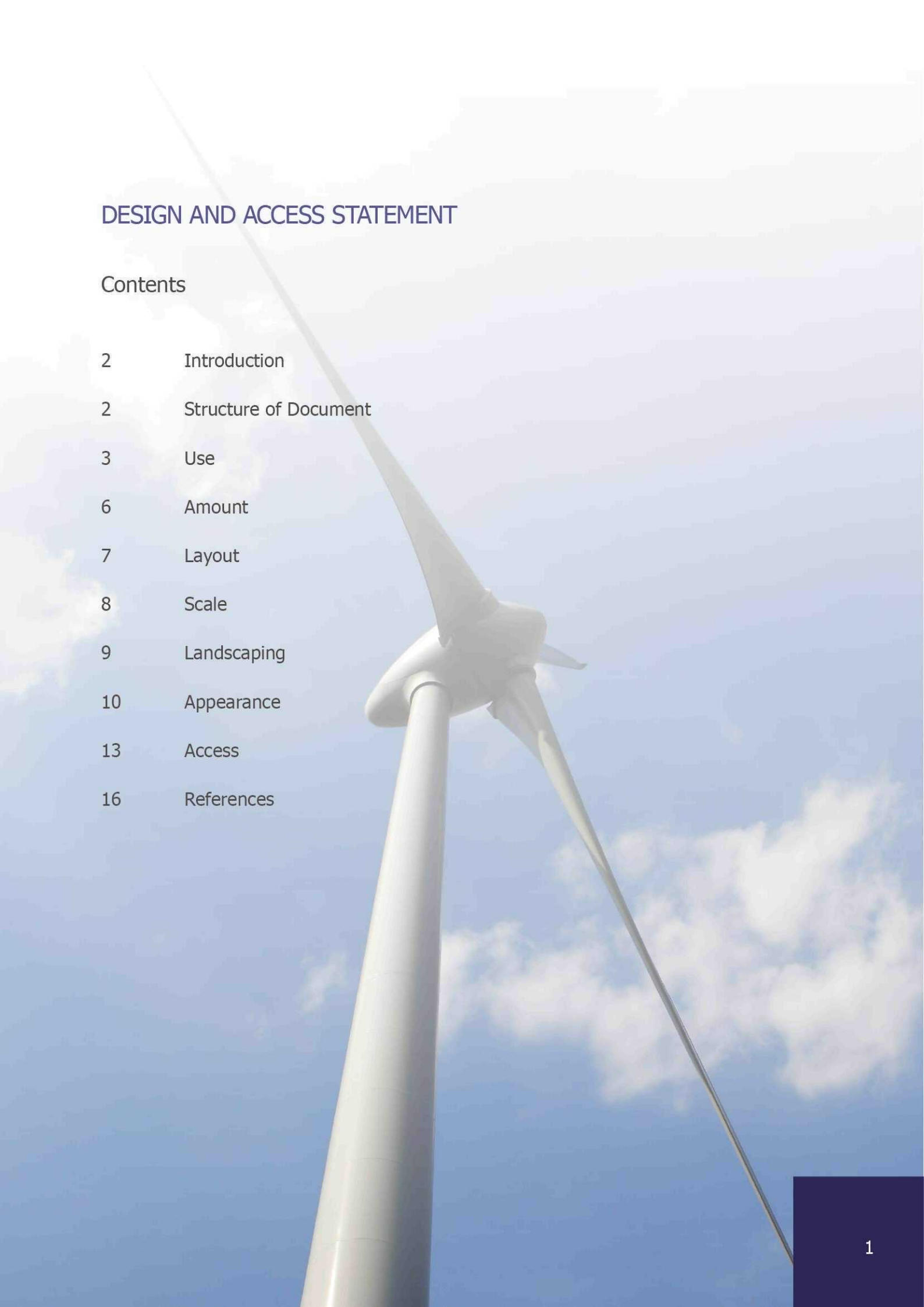
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INTRODUCTION

DA.1 In accordance with Circular 0106 (DCLG, 2006) Guidance on Changes to the Development Control System, effective from 10 August 2006 (and as required within PPS 17 policies on the delivery of sustainable development through the planning system) Engena have prepared the following Design and Access Statement to accompany the planning application for the Treading Wind Farm.

DA.2 The planning application is for a wind farm consisting of 6 wind turbines (with a maximum height to tip of 126m), a permanent 80m meteorological mast, a substation building, access tracks and hardstanding areas, underground power and telecommunications cabling, and a temporary construction/decommissioning compound.

DA.3 The proposed development would be situated on farm land 1km east of the village of Sutton St. Edmund, Lincolnshire, and 6km north-west of the town of Wisbech, Cambridgeshire.

DA.4 The Commission for Architecture and the Built Environment (CABE) publication '*Design and access statements – how to write, read and use them* ' (CABE, 2006) has been used as a guide to the preparation of this Statement.

STRUCTURE OF DOCUMENT

DA.5 The CABE guide to Design and Access Statements provides a '*crib sheet*' for planning authorities. Within a Design and Access Statement it suggest that the following questions should be addressed:

- *'Does the statement show that the applicant has assessed the site's full context, including physical, social and economic characteristics and relevant planning policies?*
- *Has the applicant demonstrated how they have taken account of the results of any community involvement?*
- *Does the statement show that the scheme has emerged from a rigorous assessment-involvement-evaluation-design process rather than trying to justify retrospectively a pre-determined solution?'*

DA.6 The guide considers seven areas to be addressed within the statement:

- Use;
- Amount;
- Layout;
- Scale;
- Landscaping;
- Appearance; and
- Access.

DA.7 This Design and Access Statement will consider the seven areas highlighted by the CABE guide and detailed with Circular 0106. Some of these areas are linked to building design, and may not be applicable to this proposal; others have been addressed in considerable detail during the Environmental Impact Assessment and within the subsequent Environmental Statement. Where these have been addressed within the Environmental Statement, the reference within **Volume 2**, **Written Statement** or **Volume 3**, **Figures** will be provided.

DA.8 The Environmental Statement comprises:

- Volume 1: Non-Technical Summary - summarises the proposal and the key conclusions of the EIA for the non-technical reader;
- Volume 2: Written Statement - presents the full assessments of the EIA;
- Volume 2: Appendices - presents the appendices referred to in the Written Statement;
- Volume 3: Figures - an A3 document presenting the figures referred to in the Written Statement; and
- Volume 4: Visualisations – an A2 document presenting the visualisations referred to in the Landscape and Visual Assessment (LVA).

DA.9 In addition to the four-volume Environmental Statement, Wind Ventures Limited has also submitted a Planning Appraisal produced by Albro Planning and Environmental. Whilst not forming part of the Environmental Statement, the Planning Appraisal is a key document within the overall submission summarising the National, Regional, County and District policy context relevant to the development; including the identified need for wind energy. The document analyses the proposed development against these policies and the need to determine the acceptability of the development at this location.

DA.10 Where assessments against planning policy are required, then the reader will be directed to the Planning Appraisal document.

USE

- *What buildings and spaces will be used for.*
- *Would the application help to create an appropriate mix of uses in the area?*
- *Would different uses work together well, or would they cause unacceptable annoyance?* (CABE, 2006).

DA.11 The Treading Wind Farm consists of six (6) wind turbine generators, a permanent meteorological mast for the lifetime of the project and ancillary infrastructure. The proposed operational lifetime of the project is 25 years, following which the wind farm would be decommissioned, unless a fresh planning permission was granted for its retention.

DA.12 **Chapter 4** (Volume 2, Environmental Statement) describes the existing use of the development site in detail. The site is commercially farmed on an arable basis, with primary crops at the time of EIA being oil seed rape, wheat, and beans.

DA.13 The nearest settlements are the villages of Sutton St. Edmund, Tydd St. Giles, Newton, Parsons Drove and Gorefield. However, dispersed dwellings and farms are also situated alongside the minor roads surrounding the site.

DA.14 A public footpath and a bridleway cross the site, with a Byway Open to All Traffic (BOAT) running along the southern border.

DA.15 **Chapter 6** (Volume 2, Environmental Statement) outlines the development proposal in detail, however, the main elements of the proposal are:

- Six Wind Turbines: Each of the proposed wind turbines would have a rated capacity of 2 to 3MW and would be a contemporary three bladed up-wind design with a maximum height to tip of 126m and internal transformers;
- Access Tracks: Access across the site is required during construction, through operation and finally during the decommissioning of the site at the end of the wind farm's operational life. Wherever possible the layout of access tracks has followed the routes of the existing farm tracks to minimise land loss and impacts on ecological habitat. Upgraded and new access tracks will have the appearance of typical vernacular farm tracks with a crushed stone running surface, they are, however, constructed to carry the heavy loads constituting the large and heavy turbine elements. The running surface is laid over a stone sub-surface which itself is constructed upon a geotextile membrane;
- Hardstandings: Hardstanding areas are required at the base of each of the turbines to provide a stable base for the cranes during construction. The hardstandings will have the same crushed stone surface as the new access tracks, but are constructed to carry the weight of the cranes and their out-riggers during turbine erection;
- Substation: To connect to the local electricity distribution network for the export of power generated, a link must be made between the wind energy project's electrical distribution network cables and the local electricity distribution network through appropriate protection equipment (fuses and the like), isolation switches and metering equipment. These elements constitute the on-site substations. Two typical 33kV substations are proposed for this project each of which would appear as a small single storey freestanding building, of approximately 4.6m by 5.6m. It is proposed that the form of the substation buildings, be made to fit in with the local farm vernacular. The location of the substations have been designed to reduce the loss of agricultural land and to allow E.on Central Networks or EDF Energy staff easy access to the buildings without the need to disrupt farming activities on site;
- Cables and Conduits: Power cables and telecommunications cables will run between the turbines and to the on-site substation. The cables will run across the site in underground cable trenches, below plough depth, primarily following the route of the access tracks. From the on-site substation the connection to the local distribution network connection point will be the responsibility of the operator, E-on Central Networks. This will be subject to a separate planning application if required. Initial survey work has suggested that the likely connection points will be to the north-west and to the east of the site, as

shown in **Chapter 6** (Volume 2, Environmental Statement);

- Meteorological Mast: The wind across the site will need to be monitored, during operation, to verify turbine performance for warranty and insurance purposes. To enable this monitoring, a 80m un-guyed self-supporting lattice tower mast is proposed with sensors mounted on booms at various heights; and
- Temporary Construction Compound: For the duration of the construction and decommissioning period, a compound will need to remain in place to provide secure storage for construction components and equipment, welfare facilities and office accommodation for site staff. This has been proposed with a typical size of 30 by 40m and will be erected upon an area of existing concrete runway.

DA.16 For clarification, **Chapter 6** (Volume 2, Environmental Statement) provides photographs of many of these typical wind farm features described above. **Figures 6.1** to **6.11**, (Volume 3, Environmental Statement) also provide typical technical drawings of these elements.

DA.17 **Chapter 7** considers the impacts of the development upon existing land use and whether these different uses work well together. It found during the three phases of the development's life that:

DA.18 During construction (**Paragraph 7.30**):

*'During key stages of construction, when traffic levels are at their highest (i.e. during the pouring of foundation concrete and the delivery of the large turbine components, see **Table 8.2**), there may be impacts on existing farm traffic. The potential impact is, however, minimised by the turbine hardstandings and wide bends which permit the passing of vehicles with minimal disruption (**Figure 3.4**). Such impacts are not considered to be significant.'*

DA.19 During operation (**Paragraphs 7.42**):

'During the operational phase of the project, no significant direct impact on the existing use of the site is anticipated. There will be a minimal reduction of land available for farming as a result of the turbine bases, hardstandings and new access tracks and meteorological mast base which are located outside of the existing runways on arable land. In total this area represents 7.2Ha (to 1 d.p.).'

DA.20 And finally during decommissioning (**Paragraphs 7.57 - 7.58** and **7.50**):

'There is not anticipated to be any significant impact on the operation of the farm during decommissioning of the proposed wind farm at the end of its consent. Once decommissioned, the only above-ground element of the wind farm to remain will be the new areas of site track which will remain in place for use by the landowners if required.'

'It is likely that a temporary compound similar in size and nature to the temporary construction compound will be required for the secure storage of equipment and for worker welfare facilities. The compound will be in situ for the duration of the decommissioning, after which the compound site will be reinstated.'

DA.21 A justification of the use in terms of land use policies, is provided within the Planning Appraisal.

AMOUNT

- *The planning application will say how much development is being applied for. The statement needs to explain why this is an appropriate amount.*
- *Is the density appropriate?* (CABE, 2006).

DA.22 **Chapter 6** (Volume 2, Environmental Statement) provides a description of the development proposal; **Chapter 3** (Volume 2, Environmental Statement) sets out the site selection and site design process for the Treading Wind Farm; whilst **Chapter 17** (Volume 2, Environmental Statement) considers the socio-economic effects of the Treading Wind Farm in the context of the recognised global imperative for renewable energy.

DA.23 As discussed within **Chapter 3** (Volume 2, Environmental Statement), through careful site selection and an iterative considered approach to site design that inherently mitigates potential impacts wherever possible the developer aims to ensure full compliance with planning policy guidance.

DA.24 The scale and design of the development is a balance between the minimisation of planning and environmental issues and the needs and benefits of a wind farm development. This is discussed in detail in **Chapter 3** which outlines both the local constraints to wind farm development and the requirements of a wind farm. These are further highlighted in **Plate 3.4**, **Chapter 3**.

DA.25 **Chapter 17** (Volume 2, Environmental Statement) discusses the predicted electricity production from the development. This utilises a capacity factor of 25.2% for the East of England as published by the Department for Energy and Climate Change (see **Appendix 1.1**, **Volume 2** for further details).

DA.26 (**Paragraph 17.59**) 'Based upon the average capacity factor for the East of England (DECC, 2010) and the REpower MM92 2.05MW wind turbine, the development would generate 27 200 MWh (net) of electricity (to 3 s.f.), meeting the average annual electricity needs of the equivalent of 5 540 homes in Fenland District (to 3 s.f.) (see **Appendix 1.1** - Energy Calculations).'

DA.27 (**Paragraph 17.62**) 'The electricity produced corresponds to the equivalent electricity consumption of 5540 homes in Fenland District, which is 15.7% to 1 d.p. of the total number, and would thereby constitute a significant commitment by both councils toward the UK target of 15% of electricity supply from renewable energy by 2015.'

DA.28 **Chapter 10** considers in detail the the proposal in the context of the landscape and of visual receptors. It concludes in **Paragraphs 10.347 - 348** that:

'The turbines will result in significant changes to views from a number of residential properties, minor roads, local footpaths and bridleways in the locality, but these visual effects will be limited and the turbines will not be overbearing in any of these views.

In conclusion, the extent of the significant effects is limited, the proposal would have an obvious and directly functional relationship with the nature of the local landscape and, in landscape and visual terms the proposal would be acceptable in

this location. An analysis in the context of National, Regional and Local planning policy is provided within the Planning Appraisal.'

LAYOUT

- *How the buildings and public and private spaces will be arranged on the site, and the relationship between them and the buildings and spaces around the site.*
- *Do all spaces have a purpose?*
- *Will public spaces be practical, safe, overlooked and inclusive?*
- *Will private spaces be adaptable, secure and inviting?* (CABE, 2006).

DA.29 These questions are not applicable to this development, however, the considered site design process should be discussed.

DA.30 **Chapter 3** (Volume 2, Environmental Statement) considers in detail the site choice and site layout evolution.

DA.31 The Treading Wind Farm is proposed by Wind Ventures Limited. Wind Ventures follow a strict site selection process, whereby areas of land with the potential for wind farm development are assessed in terms of local environmental and technical constraints to determine their suitability for wind farm development.

DA.32 The Treading site was viewed by the developer to provide a suitable balance between those needs of a wind farm which make development both technically and economically viable and the wish of the developer to minimise any potential impacts of the proposal on the local environment.

DA.33 The specific site design further evolved through the Environmental Impact Assessment process, whereby any impacts identified by the specialist assessment team were mitigated for where possible through alterations in the site design.

DA.34 Those specific constraints acknowledged by the developer during their initial site selection and design processes are discussed in the following sections.

DA.35 The initial site layout design was based upon localised constraints these included:

- Proximity of designated sites;
- Proximity to public roads and rights of way;
- Aviation constraints;
- Proximity to infrastructure e.g. water, sewage and gas pipes;
- Telecommunication links (microwave and radio telemetry); and
- Proximity of local residences.

DA.36 The needs of a wind farm were also considered including; wind resource, potential electrical connection routes, road access, land availability and land use. For further detail, please refer to **Chapter 3** of the Environmental Statement.

DA.37 Finally, to maximise performance, the wind turbines far enough apart to ensure that whatever the wind direction, the energy losses and turbine wear through wake effects are minimised.

DA.38 During the Environmental Impact Assessment process the layout was altered in consultation with the EIA ecologist as per **Chapter 3** and with regard to telecommunications links and utilities infrastructure.

DA.39 The final site layout is shown in **Figure 3.3**, (Volume 3, Environmental Statement).

SCALE

DA.40 The statement should explain and justify:

- *the height, width and length of buildings;*
- *the size of spaces in relation to each other and their surroundings, and*
- *the size of parts of a building or its details.*
- *The statement should provide clear evidence that the planned scale has been influenced by the existing character of the local area or, where relevant, opportunities to improve that character.*
- *Will the buildings sit comfortably with their surroundings?*
- *Will they, and parts like doors and windows, be of a comfortable scale for people?* (CABE, 2006).

DA.41 This section of the Design and Access statement primarily relates to the scale of the development and the appropriateness of that scale. The wind farm development proposal is for six wind turbines, with an overall height to the tip of the blade of 126m.

DA.42 Modern commercial wind turbines commonly vary between 100m to 145m to tip, and the general market movement in recent years has been to develop turbines with increased heights and rotor diameters as this offers the potential to maximise energy yields.

DA.43 126m high turbines where chosen for this site as a balance between maximising the generational potential of the site (as wind speed increases with height) and minimising landscape impacts. Resulting landscape impacts as a result of the chosen tip height are assessed in full in **Chapter 10**, **Volume 2** of the Environmental Statement.

DA.44 Currently, the Developer will be able to select wind turbines with a capacity rating of 2 to 3MW within this height constraint. However, it should be noted here that due to the different power curves of different turbines on the market (ie how production varies with wind speed in different models) a turbine with a lower rated capacity may actually produce more electricity in a particular area than a higher rated turbine, due to the close fit of the power curve to the site's specific wind regime.

DA.45 As detailed in **Volume 2** the exact make and model of turbine will not be selected until the pre-construction phase of the project. The rotor diameter and hub height combination of the selected turbine will be within this overall tip height of 126m. For the purpose of the EIA the assessment is based on a REpower MM92 2.05MW turbine. This model has a hub-height of 80m, and a rotor diameter of 92m. When a blade is in its uppermost vertical position, in line with the tower, the overall height to tip will be 126m.

DA.46 **Chapter 17** describes the anticipated electricity production from the proposed development, and the associated environmental benefits based upon this REpower MM92 2.05MW wind turbine.

DA.47 Further considerations which may affect the selection of a wind turbine development include;

- Suitable road access for this scale of wind turbine – as wind turbines are delivered in large major component form, suitable access must be available (i.e. without 'tight' turns). For this site access for abnormal loads is available from the A47, onto the B1187 and then utilising the minor road network. This is detailed in **Chapter 8**, **Volume 2** of the Environmental Statement.
- Electrical connection - wind turbines require a connection to the local electrical distribution network. However, connection points are only available at specific areas and for specific production capacities, subject to local and regional technical constraints. The complexity of the connection available and the distance to the connection point will also have financial implications for a project. It is currently envisaged that the connection could be made both to the north-west and to the east of the site, depending on the network capacity, through construction of a dedicated underground 33kV circuit, as detailed in **Chapter 6**, **Volume 2**.
- The impact on landscape - the differing scale of a turbine may alter the impact of a proposal upon the local landscape. **Chapter 10** (Volume 2, Environmental Statement) considers in detail the scale of this development, based upon 126m turbines, in the context of the site landscape character and its impact on the character of the wider landscape.

LANDSCAPING

- *The statement should justify and explain the hard and soft landscaping of private and public spaces. It should explain the purpose of landscaping and its relationship to the surrounding area. The landscaping strategy, as set out in the statement, should show how the development responds to opportunities to improve the landscape character of the site.*
- *Has landscaping been properly considered from the start?*
- *Will it help to make the place look good and work well, and will it meet any specific aims for the site?* (CABE, 2006).

DA.48 This section is not applicable to wind farm developments. Some ecological

enhancement measures are suggested in **Chapters 12 and 13** (Volume 2, Environmental Statement), but are not proposed to provide landscape enhancement.

APPEARANCE

- *The statement should explain and justify the appearance of buildings and spaces, and show how they relate to their surroundings. It should cover architecture, materials, decoration, lighting, colour and texture. The best designs link all the parts of a scheme, and the statement should show how decisions on appearance relate to all other aspects of the scheme, reinforcing the main design.*
- *How will the development visually relate to its surroundings?*
- *Will it look attractive?* (CABE, 2006).

DA.49 How the development visually relates to its surroundings is again addressed through **Chapter 10**.

DA.50 The turbine colour will be selected to minimise the turbine visibility. As noted on **Figure 6.1**, RAL 7035 is a common colour choice.

DA.51 The meteorological mast will be of a lattice rather than guyed design to reduce ecological impacts and land take. The height and location of the mast have been designed in accordance with requirements for turbine power curve testing. The colour and material of the mast is as standard for their construction.

DA.52 The substation locations have been designed to allow ease of access by E.on Central Networks or EDF Energy staff (as the proposal lies on a border between network operators). Their external appearance is suggested to be that of a typical farm vernacular or as agreed with the Local Planning Authority.

DA.53 The Landscape and Visual Assessment assesses the impacts of the development on the landscape fabric, landscape character and visual amenity. This describes how the development will visually relate to its surroundings and discusses the acceptability of impacts. The landscape and visual assessment concludes (**paragraph 10.335-10.348**):

'It is unlikely that a proposal to site a new wind energy development in the UK would not result in some significant effects on the landscape character and visual amenity of the immediate locality. However, significant effects are not necessarily unacceptably adverse.

DA.54 *Whilst the proposal would become a defining characteristic of the landscape of the site and immediate locality, wind turbines are a relatively recent addition to our environment and there is no consensus of opinion on the most appropriate types of landscape in which to site the various scales of wind energy development. As discussed in **Appendix 10.1** (**Paragraph 141-146**), guidance produced by Scottish Natural Heritage (SNH 2001 and SNH 2002) suggests that wind turbines should be located in remote places, away from centres of population and other*

built structures, whilst guidance from The Countryside Agency (CA 2002) promoted turbines on the fringes of settlements or along transport routes, rather than in more rural and remote locations.

DA.55 *Landscape character is not a static 'picture' but is ever evolving as a result of both man's influence and natural forces. There have been progressive changes to the character of this landscape over the last century as a result of changes in agricultural practices and we may see quite dramatic changes over the coming century as a result of climate change. Topic Paper 9 (Swanwick 2004) produced by Scottish Natural Heritage and The Countryside Agency examines possible landscape change over the next century and notes that climate change could have marked effects on landscape character and could compromise the characteristic features of some of our more valued landscapes (Swanwick 2004). Additionally, a recently published Natural England document; Climate Change and Nature: Adapting for the Future (NE, WWF, IUCN & RSPB, 2007) notes the limitations of the assumption that landscapes and ecosystems will remain the same indefinitely, particularly in light of the effects of climate change.*

DA.56 *The six proposed wind turbines will become a defining characteristic of the landscape on the site and local area within 3.5km - 4km of the nearest turbine. This area is not within any national or local landscape designations and so the proposed wind turbines would not compromise the purposes of any landscape designations. In terms of the landscape fabric of the site, there will not be any significant effects.*

DA.57 *Differences within public opinion on wind energy is such that it is difficult to define significant changes in views as having a significant beneficial or adverse effect on visual amenity and there is not a consensus of opinion regarding the extent to which any significant adverse effects on visual amenity should be considered acceptable. As explained in* ***Appendix 10.1****, the acceptability in landscape and visual terms of such significant effects depends on the geographical extent of the significant effects, the proportion of the time when these significant effects will be evident, the number of people who will be exposed to the effects and the proportion of receptors who are likely to consider the effects acceptable prior to and post construction (public perception).*

DA.58 *The geographical extent of the significant effects on visual amenity will be limited to within 5.5km of the nearest turbine (for high sensitivity receptors), to within approx 4.5km of the nearest turbine (for high/medium sensitivity receptors) and to within approx 3.5km of the nearest turbine (for medium sensitivity receptors), but this assumes excellent visibility and that the receptors will be exposed to the change for the first time (see* ***Appendix 10.1****,* ***Paragraph 99****).*

DA.59 *In reality, the prominence of the wind turbines and, therefore, the potential for significant effects on visual amenity will vary with the time of day and year, different weather, lighting and visibility conditions and different wind directions (e.g. the turbines are much less noticeable when the rotors are side on to the observer). Also, receptors tend to become accustomed to change over time.*

DA.60 *Opinions on wind farms vary from person to person. People who consider wind turbines to be aesthetically pleasing, symbols of clean energy that represent a real move towards combating the effects of climate change, may see the addition of*

turbines to the landscape and their views as positive/beneficial, whilst those who consider them to be inefficient and an industrialisation of the countryside are likely to see them as a negative/adverse addition to their local area.

DA.61 *For an individual, this threshold of acceptability can be different depending on the location and size of the installation, and can also vary over time as the result of changes in their understanding of the technology or their increasing familiarity with a particular scene. Public attitude surveys have consistently concluded that most people who do not think that they are going to like a wind energy scheme when one is proposed in their locality, consider the development acceptable once it is constructed. This has been one of the key findings in over 40 public attitude surveys carried out amongst residents and visitors over the last twelve years. The recent DECC commissioned research on Renewable Energy Awareness and Attitudes (GfK 2009) has noted a strong correlation between awareness and attitudes to renewable energy, in that those respondents who were more aware of renewable energy technologies were more likely to be in support. For example, it noted that support for renewable energy and the use of wind power was strongest amongst respondents who cited that living near a renewable energy development influenced their opinion.*

DA.62 *However, there is also not a consensus of opinion on the threshold above which significant changes in the view would have an unacceptable effect on visual amenity. This would vary from person to person, with those in favour of wind energy more likely to accept a further wind energy development and the associated changes to their visual amenity than those who do not find wind turbines aesthetically pleasing.*

DA.63 *A public attitude survey, carried out amongst residents living within a two mile radius of the Taff Ely Wind Farm, South Wales, concluded that:*

'More than three in five local people support Taff Ely wind farm in Wales, a pattern of support which is repeated in opinion polls carried out among people living near to the wind farm. Furthermore, the 20 turbine project can be seen by more than 70% of the people questioned, yet more thought it made the scenery more interesting than spoilt the scenery.'

DA.64 *Public Attitude surveys are further discussed in* ***Chapter 17****.*

DA.65 *The turbines will result in significant changes to views from a number of residential properties, minor roads, local footpaths and bridleways in the locality, but these visual effects will be limited and the turbines will not be overbearing in any of these views.*

DA.66 *In conclusion, the extent of the significant effects is limited, the proposal would have an obvious and directly functional relationship with the nature of the local landscape and, in landscape and visual terms the proposal would be acceptable in this location.'*

ACCESS

- *The design and access statement will need to cover two potential aspects of access, vehicular and transport links, and inclusive access. That is not to say they are separate, and the statement should show that all access issues have been considered together.*
- *Will the place be safe and easy for everyone to move around?*
- *Will it make the most of the surrounding movement network?*
- *Has the applicant clearly described their policy approach and consultation process, whether carried out or planned?* (CABE, 2006).

Access Within the Site

DA.67 The site was designed with full consideration of public roads and rights of way.

DA.68 As per the recommended separation guidelines of the PPS22 Companion Guide (ODPM, 2004), the developer applied a constraint of tip height from local roads, and also added an additional 10% buffer. This equated to a clearance of 139m, as based on the REpower MM92 wind turbine.

DA.69 The developer also assumed a separation of at least tip height (126m) from local public rights of way, to prevent blade oversail, as described in the PPS22 Companion Guide, and 200m from the bridleway.

DA.70 Only trained personnel will be afforded access to within the turbines themselves, through secured locked doors. **Paragraph 6.9**, **Chapter 6** (Environmental Statement, Volume 2) states:

- *'The lower door provides entry to the high voltage area which contains the transformer, and the upper door, accessed via a galvanised steel staircase, provides access to the turbine tower. If the transformer is housed outside of the turbine, only a single door to the tower is required. The doors are provided with security locks and are marked with safety warnings. A runged ladder with a safety fall-arrest system or cage-lift provides access up to the nacelle.'*

DA.71 Similarly, **Paragraph 7.67** and **7.68**, **Chapter 7** (Environmental Statement, Volume 2) state:

'All health and safety regulations and best practice guidelines will be followed during the construction of the proposed development to ensure the risks to personal safety and equipment on site is minimised. The British Wind Energy Association Guidelines for Health and Safety in the Wind Energy Industry (2005) presents best practice guidelines relevant to all organizations contributing to the life-cycle of wind farms – from initial feasibility studies through operation to de-commissioning. These guidelines will be followed throughout.

All site work for the Treading Wind Farm would comply with the Construction (Design and Management) Regulations 2007 approved code of practice.'

Access to the Site

DA.72 The development site is situated on farm land 1km east of the village of Sutton St. Edmund, Lincolnshire, and 6km north-west of the town of Wisbech, Cambridgeshire.

DA.73 A network of minor roads surround the site to the south, east and north, although routes are highly constrained by the region's drainage network. Cross Drove to the east of the site crosses the North Level Main Drain linking the minor roads to the west of Gorefield with the network of minor roads south of Sutton St James on the B1165. To the north of the site, a minor road (Broad Drove West) provides access from Cross Drove to a number of scattered dwellings and farms.

DA.74 The nearest major roads are the A47 to the south linking Peterborough and Wisbech and the A1101 linking Wisbech with Long Sutton on the A17 to the north.

DA.75 The proposed access routes are illustrated in **Volume 3**, **Figures**.

Proposed Access Route

i. From the A16/A17 Roundabout, follow the A16 south over the following junctions where analysis has been undertaken wherever necessary to identify works required to deliver the turbine blades as longest turbine component:

ii. A16/A152 Roundabout (**Figure 8.2**). Analysis identified the requirement to engage manual steering to avoid the central island.

iii. A16/B1180 Roundabout (**Figure 8.3**) - manual steering will be required to avoid central island.

iv. A16/A151 Roundabout (**Figure 8.4**) - manual steering will be required to avoid central island.

v. A16/B1165 Roundabout (**Figure 8.5**) - manual steering will be required to avoid central island.

vi. Continue over new roundabout - no amendments required.

vii. A16/A1073 Roundabout (**Figure 8.6**). Manual steering will be required to avoid central island. Temporary removal of one near-side lamp post will be required for the duration of turbine component delivery.

viii. A16/A15/B1524 Roundabout - no amendments required.

ix. A16/B1525/A15 Roundabout, continue straight on to the A15 - no roundabout amendments required. Continue on the A15 over the following junctions:

x. A15/B1162/B1524 roundabout - no roundabout amendments required.

xi. A15/B1443 Roundabout (**Figure 8.7**) - manual steering will be required to avoid central island.

xii. A15/B1443 Roundabout - no amendments required.

xiii. A15/Davids Lane Roundabout - no amendments required.

xiv. A15/Manor Drive - no amendments required.

xv. A15/A47 Roundabout - no amendments required. Follow the A47 over the following junctions:

xvi. A47/A16 Roundabout - no amendments required.

xvii. A47/A1139 Roundabout - no amendments required.

xviii. A47/A1073 Roundabout (**Figure 8.8**) - manual steering will be required to navigate the roundabout.

xix. A47/B1167 Roundabout (**Figure 8.9**) - manual steering will be required to navigate this roundabout.

xx. A47/B1040 Roundabout (**Figure 8.10**) - manual steering will be required to avoid central island. Temporary removal of one near-side lamp post will be required for the duration of turbine component delivery.

xxi. A47/B1167 Roundabout - no amendments required.

xxii. Left Junction A47/B1187 (**Figure 8.11**) - the splitter islands will need to be temporarily removed in order to facilitate the left turn at this junction.

xxiii. Left Junction B1187/Gull Road (**Figure 8.12**) - road widening will be required to the offside to avoid oversailing private land. Temporary removal of one offside lamp post will be required for the duration of turbine component delivery.

xxiv. Right Junction B1187/Marshalls Bank - no amendments required.

xxv. 'S' bend on Marshalls Bank/Harolds Bank (**Figure 8.13**) - temporary road widening will be required on the offside in order to facilitate navigation of this 'S'-bend. Street furniture on the offside will need to be temporarily removed for the duration of the delivery of the turbine components.

xxvi. Left junction Turnover Bank/Hassock Hill Drove (**Figure 8.14**) - Land-take across private land is required to facilitate navigation of this left turn. An agreement has been reached between the Developer and landowner to this effect, should the project be consented. Turn left into site. **Figure 6.4** shows the modifications required to the existing site entrance at this point.

DA.76 It is proposed that the delivery route for standard construction traffic follows the same approach off the A47 as that proposed for abnormal loads. This route maximises use of the trunk road network and limits traffic through the villages surrounding the site, therefore minimising the potential impact to nearby residences.

DA.77 The policy approach and consultation process is outlined in **Chapter 5** (Environmental Statement, Volume 2).

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