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Figure 1                      Comparative ZTV

# 1 INTRODUCTION

## 1.1 Background

1.1.1 This Design and Access Statement (hereafter referred to as the Statement) accompanies a planning application and Environmental Statement (ES) prepared by RES Limited (hereafter referred to as 'RES') and submitted to Scottish Borders Council (SBC) for a wind farm development at Highlee Hill, just over 3 km from the village of Chesters in the Scottish Borders, approximately 1.8 km from the Scotland - England border. The project is to be known as Highlee Hill ('the Development') and will comprise thirteen wind turbines and associated infrastructure, with a total installed generating capacity of up to 44.85 Megawatts (MW).

1.1.2 The planning application to SBC is made under the Town and Country Planning (Scotland) Act 1997 as amended by The Planning etc. (Scotland) Act 20061. The ES has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 ("The EIA Regulations") to identify and consider the potential significant effects of the Development on the environment. This Design and Access Statement has been produced with reference to the following documents:

- Planning Advice Notes (PAN) 68, Design Statements<sup>1</sup>;
- Planning Advice Notes (PAN) 78, Inclusive Design<sup>2</sup>; and
- Commission for Architecture and the Built Environment's (CABE) Guide<sup>3</sup>.

1.1.3 An iterative design process has been central to the evolution of the Development and this document seeks to demonstrate this following the guidance detailed above and comprises the following sections:

- Design Statement;
- Access Statement; and
- Summary.

## 1.2 Site Description and Context

1.2.1 The Development is located within the Wauchope area of the Scottish Borders, approximately 11 km to the south-east of Hawick, in the Scottish Borders. The site's western boundary abuts with the B6357 within the narrow valley of Hyndlees Burn, whereas its eastern boundary follows the course of Black Burn. The northern part of the site is formed by the north facing/descending slope of Highlee Hill, and abuts the A6088 carriageway and the properties of Lustruther and Whiteburn.

1.2.2 The Development Site (hereafter referred to as 'the Site') covers approximately 1097 hectares (ha) and is currently occupied in the most part by a commercially managed forest consisting primarily of sitka spruce plantation with a small proportion of open moorland the Site also contains a long established forest infrastructure including tracks, borrow pits and drainage. Several watercourses area also present within the Site, including the Westshiels Burn, Rough Sike, Fell Burn, Cross Sike and Jed Water.

1.2.3 Elevations across the site vary from 190 m Above Ordnance Datum (AOD) at the Site entrance on the A6088 north of Southdean, rising gradually to the south, up to 365 m AOD

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<sup>1</sup> Scottish Executive Development Department, "PAN 68; Design Statements". Available online at: <http://www.scotland.gov.uk/Resource/Doc/47133/0026407.pdf>

<sup>2</sup> Scottish Executive Development Department, "PAN 78; Inclusive Design". Available online at: <http://www.scotland.gov.uk/Resource/Doc/95636/0023150.pdf>

<sup>3</sup> CABE (2006) Design and Access Statements, How to write, read and use them. Commission for Architecture and the Built Environment.

on Wardmoor Hill. The proposed turbines would be located on elevations of between 218 m AOD (Turbine 8) up to 298 m AOD (Turbine 2) and would be enclosed to the west by Wardmoor Hill and Brockie Law, to the South by Needs Law and Carter Fell, and to the east by Charlie's Knowe, Blackburn Rig. To the north, the edge of site is partially contained by the elevated summits of Highlee Hill and Weasel Hill.

- 1.2.4 The Site's broader context is that of the Lammermuir and Moorfoot Hills, Central Southern Uplands and Cheviot Hills RLAs, as well as the Northumberland moors, which form part of the Cheviots National Character Area (NCA). These elevated landforms provide the key landscape context for the Development to the north, south and south-east, respectively. The River Tweed and its chief tributaries emerge from the Uplands and form the agricultural heartland of the River Tweed Lowlands RLA. The River Tweed Basin extends from Hawick (8 km to the north-west of the site) to the north-eastern boundary of the study area.
- 1.2.5 Notable topographical features and focal points in the study area include locally prominent hill summits such as Rubers Law (424 m AOD), Dunion Hill/Blacklaw (338 m AOD) and Bonchester Hill (323 m AOD). Further to the north-west the Eildon Hills comprise prominent igneous cones rising above the Tweed valley lowlands.
- 1.2.6 The upland landscapes are bisected by a pattern of river valleys, which constitute notable contrasting features in the large-scale and generally simple exposed, upland context, providing comparatively intimate, enclosed spaces. These valleys are relatively settled in comparison with the uplands, are accompanied by a greater prevalence of improved and semi-improved pasture land, hedgerows and deciduous tree cover, and form the basis for key communication routes.
- 1.2.7 The surrounding uplands are largely uninhabited other than by hamlets and individual farms, many of which are located in the transitional upland fringes or relatively sheltered valleys of minor watercourses within the uplands. The Cheviot NCA is almost totally devoid of settlement, although scattered farmsteads and a few small hamlets can be found in the base of the steep-sided valley.

## 2 DESIGN STATEMENT

2.1.1 There are six design principles that are required to be addressed within the design component of the Design and Access Statement<sup>4</sup>. These are:

- Use - what the Development will be used for;
- Amount - how much development is proposed, which is closely related to the capacity of the site;
- Layout - the general arrangement and orientation of the development and any individual components and how it fits with the surrounding environment;
- Scale - the size and extent of the development and any individual components;
- Landscaping - treatment of private and public land through hard and soft landscaping techniques to enhance or protect the amenity of the Site and surrounding environment; and
- Appearance - measures incorporated into the design of built elements that determines the impression it makes, including its built form, choice of materials, lighting, colour and texture.

### 2.2 Use

2.2.1 The principle use of the Development is to produce electricity by harnessing energy from the wind, a renewable resource. This electricity will feed into the grid network. Provisions for a grid connection will be provided as part of a later planning application, should the Development receive consent. As such, grid connection is not considered within this Design and Access Statement.

2.2.2 The Climate Change (Scotland) Act 2009<sup>5</sup> creates a long-term framework for the current and successive administrations in Scotland to ensure a reduction in Scottish greenhouse gas emissions by 80 per cent by 2050 with an interim milestone of 42% by 2020. Latest figures show Scottish emissions of greenhouse gases have fallen by 24.3% against the 1990 baseline

2.2.3 The Scottish Government is committed to promoting the increased use of renewable energy sources to help tackle climate change and to support economic growth in Scotland and in its Routemap for Renewables<sup>6</sup> and 2015 update increased the target to generate 100% electricity from renewables by 2020. Onshore wind energy is currently the most economically viable of the renewable technologies and is expected to play the greatest role in meeting these national targets.

### 2.3 Amount

2.3.1 The Development has an output power capacity of up to 44.85 MW. The Development would cover approximately 10.74 ha of the Site. This includes just over 2 ha of temporary hardstanding required during construction operations, but that would subsequently be removed and the land reinstated. The key aspect of the Development include:

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<sup>4</sup> A Design and Access Statement is required for certain developments by The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008. Available online at: <http://www.legislation.gov.uk/ssi/2008/432/regulation/13/made> [Accessed 28/01/13]. The CABE (2006) Design and Access Statements, How to write, read and use them. Commission for Architecture and the Built Environment guidelines detail these principles.

<sup>5</sup> Climate Change (Scotland) Act 2009, "Climate Change (Scotland) Act 2009", HMSO

<sup>6</sup> The Scottish Government (2011) "2020 Routemap for Renewable Energy in Scotland" Available online at <http://www.scotland.gov.uk/Resource/Doc/917/0118802.pdf> [Accessed on 11/09/2012].

- 13 three-bladed horizontal axis wind turbines. Turbine 6 and 7 at 150 m and the others at 176 m tip-height;
- turbine foundations;
- hardstanding areas at each turbine location for use by cranes erecting and maintaining the turbine;
- access tracks;
- 4 temporary, guyed lattice work meteorological ('met') masts;
- a wind farm compound containing a control building;
- an on-site electrical and control network of underground (buried) cables;
- a temporary construction compound;
- a temporary enabling works/gatehouse compound;
- 1 No. 10 m communications mast;
- borrow pits;
- drainage works including a SuDs system;
- associated ancillary works;
- engineering operations;
- limited forestry felling; and
- a connection from the control building to the local grid network (not part of the wind farm planning application).

2.3.2 The iterative design of the Development is discussed in the Layout section below and Chapter 3: Site Selection, Design Evolution and Alternatives of the ES.

## 2.4 Layout

2.4.1 The evolution of the design of the Development took cognisance of recommendations in the following policy and guidance:

- National Planning Framework (NPF3) and in the Scottish Planning Policy (SPP);
- Scottish Natural Heritage, (June 2015), Spatial Planning for Onshore Wind Turbines - natural heritage considerations, Guidance
- The Scottish Borders Council Supplementary Planning Guidance Wind Energy May 2011
- The Scottish Borders Council Supplementary Planning Guidance Wind Energy May 2011, Appendix E Spatial Strategy;
- Wind Energy Consultancy Landscape Capacity and Cumulative Impact (July 2013); and
- Scottish Natural Heritage (2014) Siting and Design of Wind Farms in the Landscape Version 2.

2.4.2 The capacity of the site to accommodate the Development has been considered through an iterative design process which took account of a range of environmental, technical and commercial issues. The final layout can be seen in Figure 2.1 of the ES.

2.4.3 The design evolution of the Development is an important part of the EIA process so that environmental effects can be avoided, reduced and mitigated. The most favourable layout of a wind farm depends upon a range of criteria that vary depending on the type of turbine

used, topography and turbulence created by local ground conditions. In order to maximise energy generation wind turbines are required to be spaced at a minimum distance from each other. This distance varies from site to site and takes account topography and prevailing wind direction. This requirement, alongside environmental constraints, dictates the number of turbines which can be located on the site. The final layout has been significantly altered since the Scoping Report was issued in order to take account of the findings of the baseline surveys, data collection, preliminary assessments (especially landscape and visual impacts) and feedback from stakeholder engagement.

2.4.4 Throughout the design process buffers were applied to ensure sensitive areas and features were avoided. Buffers were placed around a number of physical and environmental constraints. These buffers were developed throughout the EIA process as knowledge of the Site progressed and included:

- a buffer to the Ericsson/MBNL Microwave Link (150 m);
- Scottish Borders Historic Environment Register Track Buffer (30 m);
- Scottish Borders Rights of Way Buffer (150 m);
- Habitation buffer (1 km);
- Offsite forest buffer (200 m);
- River Tweed SAC buffer (100 m); and
- Goshawk nest location buffer (500 m).

2.4.5 A detailed landscape visual analysis was also conducted to identify priorities for the mitigation of potential landscape and visual impacts. These were subsequently incorporated into a list of key considerations in the development of the final layout presented in the Highlee Hill Wind Farm which included:

- the siting of the proposed Development outwith and distant from areas subject to formal landscape designations;
- the application of a suitable 'set back' from settlements and key transportation and recreational routes in order to minimise significant visual effects at these receptor locations;
- location of the proposed Development turbines and key infrastructure within a low to medium sensitivity large scale upland landscape which is dominated by large scale coniferous plantations, and which already contains suitable infrastructure and borrow pits;
- avoidance of locating turbines on prominent elevated locations at the southern end of the application site where they are likely to be most visible from locations south of the Scottish/ English border, the Northumberland National Park, and the Carter Bar vantage point;
- the application of a 'set back' from more enclosed landscapes such as river valleys and enclosed farmland landscapes to reduce the visibility and prominence of the proposed Development and avoid the potential for turbines to tower over such landscapes;
- the avoidance of prominent ridgelines and summits, especially where such summits form prominent focal points in the landscape (e.g. Rubers Law and Cheviot);
- preferential positioning of turbines in a part of the application site that is enclosed on three sides by topography, thereby ensuring that turbines are not seen in full and their perceived scale is reduced;

- use of turbines of a scale that will provide for the continuation of forest production at the site and minimisation of compensatory planting requirements;
- use of two shorter turbines (150 m to blade tip) on elevated locations nearer overlooking Chester to ensure that their prominence is reduced and to ensure consistency with the elevation of other of the proposed Development turbines;
- minimisation of additional/new site infrastructure; and
- careful positioning of any additional/new infrastructure within forested areas and in locations that have minimal visibility from external viewpoints.

### *Layout 1*

2.4.6 The Scoping Report, which was issued in January 2014, presented a development consisting of thirty-seven turbines with a maximum height to tip of 150 m. Following discussions with SBC and SNH, and an examination of key environmental and technical considerations (as discussed in relevant chapters of the ES) a series of design priorities were identified, as described in Chapter 3 of the ES and as summarized in paragraph 2.15, above.

### *Layout 2*

2.4.7 Following the adoption of these priorities the number of turbines was reduced to twenty to provide for the avoidance of placing turbines and infrastructure within, or close to prominent ridgelines overlooking the smaller scale settled farmland of the Upland Glen landscape that form part of the A6088 corridor and concentration of the proposed turbines within the interior.

### *Layout 3*

2.4.8 Following further detailed analysis of technical and environmental constraints the number of turbines was reduced further to thirteen, and the turbine size increased to 176 m, and the layout of the Development refined to achieve a suitable landscape fit and cohesiveness of appearance in views from a range of external viewpoints.

### *Layout 4*

2.4.9 The final layout was based on a final sweep of detailed constraint analysis, consultation responses and technical and commercial deliberations, and provided for relatively minor adjustments to the layout of the Development. These changes were primarily related to a reduction in the size of Turbines 6 and 7 to 150 m. The final layout is considered to represent the best environmental fit within environmental, technical and commercial constraints, operating efficiently and making a meaningful contribution to renewable energy generation targets.

## 2.5 Scale

2.5.1 Two aspects of scale are considered in the design of a wind energy development; extent and height. The extent of the Development relates to the number of turbines that can reasonably be accommodated on the site.

2.5.2 The Development layout has been significantly amended from that layout which was presented in the Scoping Report. The original 2014 Scoping Report presented a layout which consisted of 37 turbines at a height of up to 150 m to blade tip (a mix of 125 m and 150 m turbines), after detailed consideration of the height of turbines at this location the layout as submitted consists of eleven turbines at a height of 176 m to blade tip and two at 150 m.

2.5.3 The number of turbines in the final layout was decreased to 13 in order to reduce the visual impacts and the perceived scale of the Development from key viewpoints along the A6088 corridor and the nearby settlements of Chesters and Southdean, as well confining the



proposed turbines to locations within the interior of the large scale Southern Uplands with Forest Covered landscape.

- 2.5.4 The increase in size of eleven of the proposed turbines was applied selectively to those turbines set back from prominent ridges and the edges of the Southern Uplands, so as to take advantage of the topographical enclosure of the Site.
- 2.5.5 The effect of the reduction in turbine numbers, but increase in turbine sizes was tested using draft comparative wirelines and ZTVs. Figure 1 of this Statement illustrates the extent to which the amended turbine size would have altered the viewshed of the Development. This image shows the viewshed for 130 m, 150 m, as well as the combination of submitted scheme (with eleven blade tips of 176 m and two at 150 m). It is apparent from this figure that there would be negligible differences between the three options.
- 2.5.6 The Development's relationship to its landscape and visual context is illustrated in the computer-generated photomontages contained in Volume II of the ES. These photomontages indicate that the Development is of a scale that is appropriate to the Site and surrounding upland landscape and which, when experienced from neighbouring glens is partially or substantially screened, thereby reducing the perceived scale of proposed turbines from these sensitive settled landscapes where the majority of receptors are located.

## 2.6 Landscaping

- 2.6.1 The main component of the Site's character is that of commercial forestry plantation. This is consistent with the predominant land use in the large scale southern Uplands in the vicinity.
- 2.6.2 The effect of the Development on the landscape fabric, including physical removal of landscape elements required to accommodate the Development, would be minimal and mostly reversible. Similarly, significant effects on the land-cover of the Site are not anticipated to be significant as the dominant cover (forestry) would, with the exception of 26.13 ha, be maintained as per the existing forest plan. This has been discussed further in Chapter 4: Landscape and Visual of the ES. Following completion of construction, temporary elements of the Development will be removed and the ground will be restored appropriately (most likely with previously excavated material) and either replanted with trees in the forest area or allowed to re-vegetate to blend with undisturbed areas adjoining the Development.
- 2.6.3 In order to further minimise potential landscape and visual effects of the Development, new tracks would match the character and appearance of existing forest tracks in the vicinity, and any disturbed ground situated along the edges of tracks would be reinstated to blend with adjoining ground as soon as practicable to minimise the prominence of the tracks.
- 2.6.4 Restoration of the Site will also take place following decommissioning. Turbine foundations will be left in-situ, below ground, and have no residual discernible landscape and visual effects following the restoration of ground cover. Similarly, underground cabling will remain, thereby avoiding disturbance of ground cover established following the placement of the cables. Proposed new/additional access tracks (primarily spurs to turbine locations) may be retained at the request of the landowner or otherwise they will be re-graded and locally native vegetation reinstated utilizing seed collected from a suitable donor site elsewhere on the site. Prior to decommissioning, a decommissioning and restoration plan will be prepared in accordance with the relevant environmental requirements at the time.
- 2.6.5 Given the current predominance of forestry at the Site, forestry management has also been a key consideration within the design of the Development, and Chapter 10: Forestry contains a detailed assessment of the proposed forestry associated with the Development.

2.6.6 The majority of the wind farm infrastructure is located within the Dykeraw forest plantation which has been subject to ongoing phased felling and replanting operations since 2004. The forest now consists of a mix of young and mature timber. The existing Forest Management Plan states that the remaining areas of mature forest are to be felled between 2018-2022. This coincides with the predicted start of the wind farm construction (currently programmed for 2019). Several forest 'coupes' which are identified to be felled in that timeframe contain the wind farm infrastructure. The remaining wind farm infrastructure to be located in areas of younger forest will only require keyhole felling which is unlikely to produce any timber of marketable quality and would be offset with compensatory planting where required. The extent, location and composition of this planting will be agreed with Forestry Commission Scotland taking into account any revision to the felling and restocking plans prior to the commencement of construction and will be such that there is no reduced public benefit arising from any reduction in forestry cover at the Development Site.

2.6.7 On the basis of the preceding analysis, the Development is considered to comply with the criteria of the Scottish Government's Control of Woodland Removal Policy without off-site compensation planting. Further information on the impacts on the forestry can be found in Chapter 10: Forestry.

## 2.7 Appearance

2.7.1 The appearance of wind energy developments, particularly the type and siting of the turbines, is of great importance in terms of minimising landscape and visual impacts. The general principles followed in the process of design for appearance are for the Development to:

- Have a position and design that relates to the scale and form of the large scale undulating Southern Uplands Forest Covered landscape in which it would be sited;
- conserve key characteristics of the landscape and views from key receptor locations, including the scale and general simplicity of the uplands landscape and prominent skylines and focal points;
- minimise the potential for significant effects on key landscape and visual receptors, including landscape designations, settlements and key transportation and recreational routes;
- avoid significant cumulative effects through siting and specific design approaches; and
- have a cohesive and balanced appearance with minimal stacking in as many aspects as practicable.

2.7.2 These principles have been followed in considering the appearance of the Development as far as is practicable within the constraints and technical operational requirements.

### 3 ACCESS STATEMENT

3.1.1 This part of the statement must address two inter-related issues:

- General movement to and through the Site; and
- How all members of society will be able to use the Site.

3.1.2 The CABE<sup>7</sup> guidance provides a range of questions in relation to safe and inclusive access. These are aimed primarily at other forms of development with a specified end user. Although wind energy developments are not classed as engineering operations, their characteristics are similar in terms of societal access. Wind farms are not generally developments which are widely accessed by the public. As a result, this access statement focuses on the movement of vehicular traffic to site during the three phases of development. Other route users are specifically considered with respect to existing public access routes and potential impacts of the Development on these.

#### 3.2 Policy Context

3.2.1 Relevant transport policies were reviewed to establish any local and regional freight or HGV access strategies.

3.2.2 In undertaking the assessment of potential access and traffic effects on the local road network, the following guidance document has been taken into account:

- Institute of Environmental Assessment (IEA, 1993) Guidelines for the Environmental Assessment of Road Traffic<sup>8</sup>;
- Scottish Planning Policy<sup>9</sup>;
- Planning Advice Note (PAN) 57: Transport and Planning; and
- SBC Guidance.

3.2.3 Further details are provided within Chapter 11: Traffic and Transport of the ES.

#### 3.3 Route to Site

3.3.1 An Abnormal Loads Assessment was undertaken which established the feasibility of the routes to accommodate the abnormal loads associated with this type of development. It is anticipated that the port of entry for turbine delivery would be the Port of Blyth. From there the turbine deliveries would proceed around the north periphery of Newcastle before joining the A696 and travelling north-west until joining the A68. Shortly after crossing the Scottish Border the turbine deliveries would turn off onto the A6088 which takes them to the site entrance north of Southdean. Deliveries will be possible with upgrades to sections of the route to accommodate abnormal load vehicles. The route to site can be seen in Technical Appendix 11.2 of the ES>

3.3.2 A series of mitigation measures were identified in order to ameliorate potential impacts associated with the Construction phase of the Development. These include the following:

- Preparation of an appropriate Traffic Management Plan (TMP) in consultation with SBC prior to construction and decommissioning;

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<sup>7</sup> CABE (2006) Design and Access Statements, How to write, read and use them. Commission for Architecture and the Built Environment.

<sup>8</sup> Institute of Environmental Assessment (1993) 'Guidelines for the Environmental Assessment of Road Traffic', IEA.

<sup>9</sup> Scottish Government (2014) Scottish Planning Policy. Available online at: <http://www.scotland.gov.uk/Resource/Doc/300760/0093908.pdf>

- preferential scheduling of transportation and deliveries outside of peak flow hours, in order to minimise disruption to general traffic flows on the network;
  - the use, as necessary of escort vehicles for transportation and deliveries;
  - implementation of traffic restrictions to stop traffic travelling in the opposite direction in order to allow abnormal load vehicles to negotiate specific pinch points on the route;
  - adoption of appropriate warning signs will be used to warn other motorists of the presence of abnormal load vehicles; and
  - discussions with the local authority will be necessary to determine traffic management measures for the abnormal load vehicle movements.
- 3.3.3 Continuous monitoring during construction is not necessary; however the TMP will ensure that frequent inspections are carried out to ensure that agreed mitigation measures, as outlined above, are being undertaken. The exact extent of the upgrade and widening works will be confirmed through detailed design work and consultation with Northumberland County Council.
- 3.3.4 The traffic assessment indicates that all potential effects on traffic and transport receptors, and associated environmental receptors resulting from additional traffic on the local road network as a result of the construction, operation and decommissioning of the Development have been assessed as negligible and not significant in terms of the EIA Regulations.
- 3.3.5 Movement to site is largely a construction consideration as the operational traffic generation of the Development is very small. During the approximate 18-24 month construction period, vehicle access to site will be mainly required for:
- Delivery and removal of plant / materials in relation to site mobilisation and set up of site compound;
  - Delivery of geotextile materials and aggregate to construct site roads and hardstandings;
  - Delivery of concrete;
  - Delivery of steel reinforcement;
  - Delivery of base rings for turbines;
  - Delivery of transformers and switchroom equipment;
  - Delivery of sand bedding for cabling;
  - Delivery of cabling for turbines;
  - Delivery of turbine components (including abnormal loads);
  - Delivery and removal of cranes for turbine erection;
  - Miscellaneous deliveries; and
  - Construction worker travel movements.
- 3.3.6 The A6088 forms part of an established road network for Heavy Goods Vehicles and traffic movement in the area, and the use of this maximises the use of the existing infrastructure network. The traffic generated by the Development will increase traffic flows on the A6088 during construction operations. However, the level of flow increase generated by the Development on the A83 is assessed as not significant, with the A6088 currently operating below its potential vehicular capacity in this area.

### 3.4 On Site Access

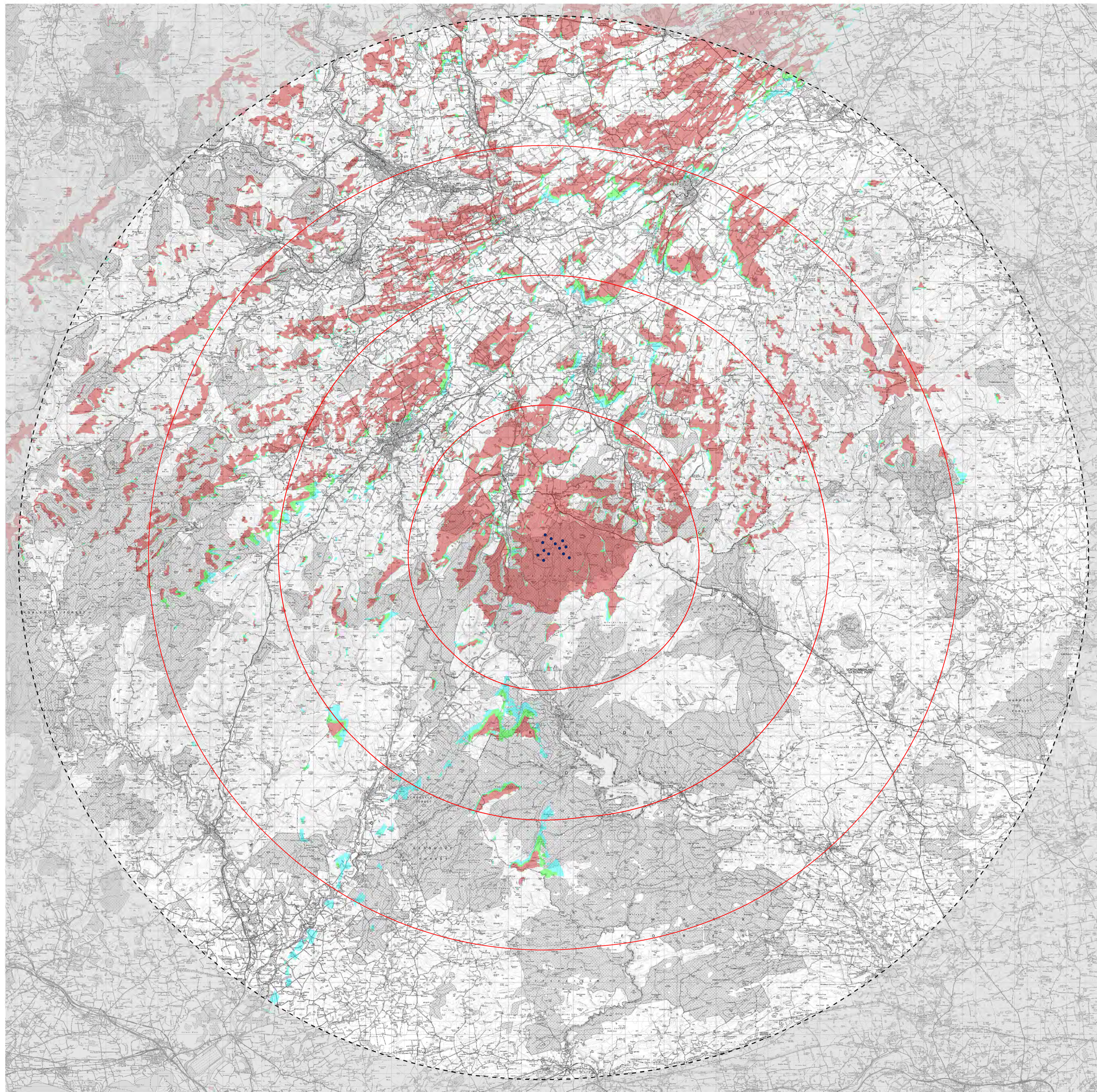
- 3.4.1 Site access will be taken from the A6088 carriageway north of Southdean. Details of the site entrance from the A6088 are shown in Figure 2.12 of the ES.
- 3.4.2 The entrance would have wide access with visibility splays suitable for the Development and following current government guidance. Visibility splays at the access would be maintained in agreement with SBC. Vehicular access to the site will be controlled through the use of an appropriate Transport Management Plan and will adhere to appropriate strategies for public safety. The condition of the access tracks and other elements will be inspected regularly to reduce the risk of failure that may result in damage to the local environment.
- 3.4.3 The on-site access tracks will be required to provide access to the wind turbines and other on-site infrastructure. Tracks will be unpaved and constructed of a graded local stone with a minimum running width of approximately 5 m. The site access would, with the exception of a small number of short sections of tracks and spurs to turbine locations, be based on an improvement of existing forest tracks. Whilst some local passing places would be necessary along the improved track, construction requirements on this track are anticipated to be minimal and the character and scale of the track would be maintained, broadly, as it is now.

### 3.5 Public Access

- 3.5.1 Wind farms are in effect electricity generating stations, but unlike more traditional fossil fuel power stations, their location is dictated based on the availability of adequate wind resource. In this respect wind farms are generally sited in open countryside and do not have many of the negative connotations relating to access and safety often associated with more traditional power stations. The purpose and characteristics of the Development are such that on-site access for the wider public is not a key feature of the design process although the Site will remain accessible under the Land Reform (Scotland) Act 2003.
- 3.5.2 Whilst no long term severance of public access is anticipated as a result of the Development it is likely that there will be some restrictions to access to the Site during the construction period to ensure compliance with relevant health and safety requirements. However, such restrictions would not be inconsistent with access restrictions typically imposed during forest operations at the Site.
- 3.5.3 Public access would not be restricted within the Development during operation except where operational maintenance or health and safety restrictions required this; however access to the Site would not be actively promoted. As the Site currently comprises commercial forestry and is not widely used by the public, the proposed arrangements would not change the existing position.

## 4 SUMMARY

- 4.1.1 This statement has summarised the key design and access issues considered as part of the design process for a wind energy development.
- 4.1.2 It has provided details of the main elements of the Development with regard to:
- Use;
  - Amount;
  - Layout;
  - Scale;
  - Landscaping; and
  - Appearance.
- 4.1.3 The vehicular access arrangements, on and off site are outlined including the implications of the Development on public access, on and off site, and a summary of any changes to the current access arrangements at the Site.
- 4.1.4 The design principles outlined in this document have been applied to the Development to ensure that it is an appropriate design to allow effective and meaningful generation of electricity from a renewable source, the wind, whilst responding reflecting the scale of the surrounding landscape and avoiding significant detrimental environmental effects.



HIGLEE HILL  
WIND FARM  
FIGURE 1

COMPARATIVE ZTV:  
FINAL LAYOUT VS  
150m and 130m TURBINE

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2016 LICENCE NUMBER 0100031673.

Key

- Proposed Turbines
- - - 40km Buffer from Outer Turbine
- 10km Radii from Proposed Turbines

Zones of Theoretical Visibility



1. The ZTV analysis does not take into account the screening effect of vegetation, buildings and other surface features
2. Predicted visibility based on a viewer eye height 2m above ground
3. Visibility calculated using Ordnance Survey Terrain 5 DTM on a 5m Grid
4. Effect of earth curvature and light refraction is included



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SCALE - 1:150,000 @ A1

DESIGN AND ACCESS STATEMENT

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