



Energy

**PEEL Wind Farms (Yell) Ltd**

**Beaw Field Wind Farm**

Gate Check 2

February 2016



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## Introduction

Peel Wind Farms (Yell) Ltd (the Applicant) submitted a Scoping Report for the proposed Beaw Field Wind Farm, to the Energy Consents and Deployment Unit (ECDU), Scottish Government, in April 2015. The Proposed Development is an onshore wind farm of capacity greater than 50MW, which would be located to the north and west of Burravoe, Yell, on the Shetland Islands. The application area, referred to in this report as the 'Site', is approximately 1135ha (Figure 2 illustrates the extent of the Site and identifies the proposed Application boundary).

Wardell Armstrong LLP has prepared this report on behalf of the Applicant. This report informs the Gate Check 1 process, set out by the ECDU for applications for developments submitted under Section 36 of the Electricity Act 1989. This report has been prepared following pre-application discussions with officials from the ECDU and describes how the issues raised in the scoping opinion have been considered and included in the environmental studies undertaken for the Environmental Impact Assessment (EIA). Further consultation since the scoping opinion was published has also been identified. This report also considers the iterative design process to achieve the final turbine layout design.

The structure of this Gate Check 1 report provides information as follows:

- Outline description of the Proposed Development;
- Design evolution and issues addressed by design and location of turbines;
- Summary of other issues raised in scoping that informed the design process; and
- Roadmap for submission of the Environmental Statement (ES).

## Proposed Development

The Proposed Development is the product of an iterative design process that has considered environmental issues at each stage. Further details of the design process are provided below and will be set out in more detail in the ES.

At design freeze, the Proposed Development comprises:

- 17 wind turbines with a maximum tip height of 145m;
- 17 crane pads and laydown areas one for each turbine;
- Access tracks;
- Extraction of aggregate from up to four borrows pits located within the Site;
- Temporary construction compound area and Site office;
- Electrical substation and control building;
- Underground electrical and communication cabling;
- Permanent anemometry mast; and a
- Radio receiving tower

## EIA Scoping and Consultation

The Applicant submitted an EIA Scoping Request to Scottish Ministers in April 2015 and a Scoping Opinion was subsequently issued in May 2015. The individual comments of all consultees have been considered in developing the baseline surveys and the EIA methodology, where appropriate these have been followed up by meetings and specific discussions to inform ongoing studies and the consultation process. Appendix 1 is a summary of the key issues identified by each consultee during scoping and provides a commentary with respect to studies for the planning, environmental, social and economic aspects considered in the EIA.

The Scoping process has been designed to ensure the EIA is sufficiently comprehensive to enable thorough consultation at the planning stage, with particular emphasis on the environmental effects of the Proposed Development. The Scoping Report was prepared to enable the ECDU to undertake preliminary consultations with the relevant departments and organisations (statutory and non-statutory consultees). Table 1 lists the statutory and non-statutory consultees that the ECDU consulted and received responses from prior to the end of the consultation period on 8<sup>th</sup> May 2015. No response from the John Muir Trust, Mountaineering Council of Scotland or the Association of Salmon Fishery Board has been received to date.

**Table 1: List of Statutory and Non-statutory Consultees Consultation since Gate Check 1**

Statutory Consultee	Non-statutory Consultee
Shetland Island Council (SIC)	Scottish Water
Scottish Environment Protection Agency (SEPA)	The Scottish Rights of Way and Access Society
Scottish Natural Heritage (SNH)	Highlands and Islands Airport Limited (Sumburgh Airport)
Royal Air Force (RAF) – Civil Aviation Authority	NATS (formally National Air Traffic Service)
The Crown Estate	Serco – Scatsta Airport
Ministry of Defence (MOD)	Shetland Amenity Trust
Historic Environment Scotland (HES)	Royal Society for the Protection of Birds (RSPB)
Marine Scotland Science (MSS)	BT
Transport Scotland	The Joint Radio Company Ltd
	Scottish Wildlife Trust (SWT)
	Visit Scotland
	Forestry Commission Scotland
	Vodafone
	British Horse Society (BHS)

**Table 1: List of Statutory and Non-statutory Consultees Consultation since Gate Check 1**

Statutory Consultee	Non-statutory Consultee
	Airwave Solutions Ltd.
	Sportsscotland

### Consultation since Gate Check 1

Since receipt of the Gate Check 1 report, direct consultation has taken place and this has been summarised in [Table 2](#).

**Table 2: Consultation Undertaken Since Gate Check 1**

Topic	Consultee	Form of Consultation (Email / Phone / Letter / Meeting)	Consultee Response	Comments / Actions
Noise, Air Quality and Amenity	SEPA	Letter 20 <sup>th</sup> January 2016	SEPA note that Air Quality has been scoped out of the assessment process further to consultation with SIC.	No Further Comments
Hydrology and Hydrogeology	SEPA	Letter 20 <sup>th</sup> January 2016	SEPA note the statement "A data request to SEPA confirmed that there were no groundwater abstractions within 250m of the construction footprint, within the Proposed Development". SEPA advises the applicant that SEPA do not hold records of unauthorised private water supplies and recommend the applicant contact the Council and Scottish Water to establish all properties in and within proximity of the development that may have private water supplies. This should be in line with the advice set out in SEPA's Scoping Response.	SIC has confirmed that they have no records of Private Water Supplies within 5km of the centre of the Site. Scottish Water plans shows the presence of a main water supply within the Site, which supplies the settlements and properties surrounding the Site.
			SEPA note and welcomes that the access track route has been designed to take into consideration existing access tracks and to utilise existing watercourse crossings and the ES will provide a table detailing the justification for any engineering activity in the water environment. The ES will also include information to demonstrate any new watercourse crossing have been designed to convey the 1 in 200 year design flow.	No Further Comments
			We note that no water abstractions are proposed.	No Further Comments
			SEPA note flood risk will be considered within Chapter 15: Hydrology and Hydrogeology and that a Flood Risk Assessment has been undertaken to assess the risk of	No Further Comments

**Table 2: Consultation Undertaken Since Gate Check 1**

Topic	Consultee	Form of Consultation (Email / Phone / Letter / Meeting)	Consultee Response	Comments / Actions
			flooding from and to the proposed development. This should be in line with the advice set out in SEPA's Scoping Response.	
Peat and Soils	SEPA	Letter 20 <sup>th</sup> January 2016	SEPA note NVC surveys have been undertaken and the impact of the Proposed Development on terrestrial ecology, ornithology and peat resources will be assessed in Chapter 11: Ecology, Chapter 10: Ornithology and Chapter 12: Soils and Peat of the ES. This should be in line with the advice set out in SEPA's Scoping Response. SEPA welcome the proposals to produce a Peatland Restoration and Management Plan (PRMP) and that the outline requirements to inform the plan will be identified in the ES.	No Further Comments
Ecology	SEPA	Letter 20 <sup>th</sup> January 2016	SEPA note a Phase 1 Habitat Survey and NVC has been carried out to inform understanding of wetland types across the site. This has informed the turbine layout and associated infrastructure. SEPA welcome that significant impacts on GWDTE will be avoided where possible through scheme design and mitigation. This should be in line with the advice set out in SEPA's Scoping Response.	No Further Comments
	MSS	Letter 12 <sup>th</sup> January 2016	The report states that issues raised in the scoping opinion have been considered and included in the environmental studies undertaken for the Environmental Statement (ES). Further reference is made to Chapter 15 Hydrology and Hydrogeology and Chapter 11 Ecology of the ES where	MSS's Scoping Responses requested that ' <i>all pre-construction site characterises data for fish, macroinvertebrate and water quality should be presented in the ES along with appropriate site specific mitigation measures and full details outlining all monitoring plans during and post-construction.</i> '

**Table 2: Consultation Undertaken Since Gate Check 1**

Topic	Consultee	Form of Consultation (Email / Phone / Letter / Meeting)	Consultee Response	Comments / Actions
			<p>potential impacts on water quality and aquatic fauna will be addressed.</p> <p>MSS notes electrofishing surveys were carried out in 2015 however, there appears to be no reference to water quality and macroinvertebrate surveys, as were suggested in our scoping response.</p>	<p>The Outline Construction Environment Management Plan (OCEMP) prepared as part of the ES provides details on water quality monitoring prior to, during and after construction. Prior to construction baseline data on water quality and macroinvertebrates would be collected post-consent.</p>
			<p>MSS suggests the developer to consider the potential cumulative impacts on water quality, fish populations and fisheries as a result of the present proposal and other operational or proposed aquaculture developments in the area.</p>	<p>The potential for cumulative impacts on water quality has been considered in Chapter 15: Hydrology and Hydrogeology and fish populations and therefore fisheries in Chapter 11: Ecology.</p>
Carbon Balance	SEPA	Letter 20 <sup>th</sup> January 2016	<p>SEPA note Chapter 14: Carbon Balance will address Carbon emissions associated with disturbance of peat during construction. SEPA refer the applicant to Wind Farms and Carbon Section of the Scottish Government website for the most recent guidance on calculating carbon balance.</p>	No Further Comments
Cultural Heritage	HES	Letter 21 <sup>st</sup> December 2015	<p>HES are content that the details given in Gate Check 1 reflect the involvement Historic Scotland (our predecessor body) had with the EIA process for this development. We consider that they have been appropriately consulted at the scoping stage, and that the proposed assessment is adequate for our requirements. HES particularly welcomes the fact that their comments on the methodology have</p>	No Further Comments

**Commented [GR1]:** has macroinvertebrate surveys been done?



**Table 2: Consultation Undertaken Since Gate Check 1**

Topic	Consultee	Form of Consultation (Email / Phone / Letter / Meeting)	Consultee Response	Comments / Actions
			<p>been given consideration and value the opportunity to comment on this at an early stage.</p> <p>Overall, HES considers that the pre-application consultation process, combined with scoping, has been very helpful in agreeing the scope and methodology of the cultural heritage assessment for this development.</p>	
	Shetland Amenity Trust	Email	<p>The purpose and outcome of the meeting on the 23<sup>rd</sup> June is correct but of course covers a multitude of things. In particular it makes no mention of the archaeological contractor exploring the use of geophysics and lidar.</p> <p>Shetland Amenity Trust state that there is not enough detail to determine whether their comments regarding DGPS were addressed (the Trimble GeoXR can be used with or without that facility) and the transects appear not to have been reduced in width as per their request, which Shetland Amenity Trust will accept provided that there is follow through with Lidar or Geophysics.</p>	<p>The walkover survey was undertaken with the aid of a Trimble GeoXR DGPS. The presence of standing water, peat cutting and peat erosions limits the practicality of a geophysical survey and such methods are unlikely to rule out the potential for discovery of archaeological features and/or deposits. An archaeological watching brief will be required during the construction phase.</p>
Construction Environment Management Plan (CEMP)	SEPA	Letter 20 <sup>th</sup> January 2016	<p>SEPA note that the design freeze layout of the wind farm has considered a 50m buffer to protect watercourses except for crossing points. Potential impacts on water quality and aquatic fauna will be addressed in Chapter 15: Hydrology and Hydrogeology and Chapter 11: Ecology, respectively.</p>	No Further Comments

**Table 2: Consultation Undertaken Since Gate Check 1**

Topic	Consultee	Form of Consultation (Email / Phone / Letter / Meeting)	Consultee Response	Comments / Actions
			Pollution prevention measures will be considered in the ES and the details prepared for the CEMP. This should be in line with the advice set out in SEPA's Scoping Response.	
	SEPA	Letter 20 <sup>th</sup> January 2016	SEPA note that Chapter 3: Project Description will provide details of the options analysis and design details of four proposed onsite borrow pits. The design and operational details of aggregate extraction from the borrow pits will be included in the relevant impact assessment chapters of the ES. This should be in line with the advice set out in SEPA's Scoping Response.	No Further Comments
Borrow pits	SNH	Letter 18 <sup>th</sup> January 2016	<p>SNH are satisfied that the developer appears to have taken on board the advice we have given to date. However four locations for borrow pits have now been identified which were not covered in that advice and it is not clear whether these areas were included in the otter surveys so far carried out. If they were not then we would advise that each potential borrow pit together with an area extending out 250m beyond its perimeter should be surveyed for otters to allow impacts on any otter holts to be addressed before the application can be determined.</p> <p>At this point it is not possible for SNH to comment on the quality of the work undertaken or the findings of studies undertaken. Therefore, please note that SNH's advice is given without prejudice to a full and detailed consideration of the impacts of the proposal if submitted for formal consultation as part of the EIA or planning process.</p>	The Study Area for otter survey included all watercourses and edges of waterbodies within the Planning Application boundary, this including 250m beyond the borrow pits.

**Table 2: Consultation Undertaken Since Gate Check 1**

Topic	Consultee	Form of Consultation (Email / Phone / Letter / Meeting)	Consultee Response	Comments / Actions
General	SEPA	Letter 20 <sup>th</sup> January 2016	SEPA note the statement that the decommissioning will be in line with the current best practice. This should be in line with the advice set out in SEPA's Scoping Response.	No Further Comments

## Summary of further environmental considerations informing the design process

Baseline surveys were completed by end of September 2015 and a comprehensive set of environmental constraints have been developed to inform the design freeze (see Figure 1: Stage 1 to 4). The details of the methodology adopted to assess potential impacts and derive mitigation measures will be defined within each ES Chapter.

Further analysis of the environmental constraints not specifically included at the design freeze layout (as shown on Figure 1) but considered during the design iteration will also be reported in the ES. These considerations have been outlined in the following sections.

### Borrow pit design and potential impacts associated with extraction and restoration

SIC and SEPA require details of the design, operation and restoration of borrow pits so that the potential impacts associated with noise, dust, blasting and visual effects can be assessed. Chapter 3: Project Description will provide details of the options analysis and design details of four proposed onsite borrow pits. The design and operational details of aggregate extraction from the borrow pits has been included in the relevant impact assessment chapters of the ES. Due to the distance of the borrow pits from the coastline (>3km), the potential impact on marine mammals has been scoped out of the EIA.

### Commercial aquacultural activities in Burravoe and Hamnavoe

SIC and Marine Scotland Science (MSS) required the potential for over siltation of watercourses and potential impacts on fish populations to be considered. The design freeze layout of the wind farm has considered a 50m buffer to protect watercourses except for crossing points. Potential impacts on water quality and aquatic fauna will be addressed in Chapter 15: Hydrology and Hydrogeology and Chapter 11: Ecology, respectively. The socio-economic elements of the aquacultural operations consider the current level of commercial activity and take into account the potential for future expansion of the industry. This will be addressed in Chapter 6: Socio-Economic, Tourism and Recreation Assessment.

### Peatland habitats

SIC, SNH, RSPB, SWT and SEPA required a detailed assessment of the loss of habitat and associated peatland to augment and inform potential impacts of the Proposed Development on ornithology. The design freeze layout avoids areas of deep peat where possible, based on data from the peat depth grid survey across the Site. Detailed data on peat depths was obtained from 50m point and transect surveys on or near to access tracks, turbine bases and hardstanding areas. NVC surveys have also been undertaken, to inform the position of turbines. The impact of the Proposed Development on terrestrial ecology, ornithology and peat resources will be assessed in Chapter 11: Ecology, Chapter 10: Ornithology and Chapter 12: Soils and Peat of the ES.

A Peatland Restoration and Management Plan (PRMP) will be required to manage the extraction, reuse and restoration of disturbed peat and the details of this would be prepared and agreed prior to the commencement of construction. To minimise the volume of peat disturbed, appropriate measures will be defined in the PRMP, in accordance with SNH and SEPA guidelines

Carbon emissions associated with disturbance of peat during construction will be addressed in Chapter 14: Carbon Balance, which will rely on best practice guidance to be detailed in the PRMP, which will detail preventive measures avoiding the drying or oxidation of peat during construction.

#### **Water quality, groundwater abstractions, water environment and flood risk protection**

A data request to SEPA confirmed that there were no groundwater abstractions within 250m of the construction footprint, within the Proposed Development. Access tracks have been designed to minimise the number of new watercourse crossings required and avoid sensitive habitats. Six watercourse crossings have been identified (see Figure 2) to achieve access requirements for design freeze. Watercourse crossings will be designed to allow for continued passage of otters and fish.

Flood Risk Assessment will be considered within Chapter 15: Hydrology and Hydrogeology, which considers the requirements of drainage to facilitate construction.

#### **Amenity, recreation, cultural heritage and access**

SIC, SNH and HES required an analysis of the visibility of the Proposed Development from a number of residential and cultural heritage features such as listed buildings. Chapter 7: Landscape and Visual Impact Assessment and Chapter 9: Cultural Heritage will consider the visibility and impact of identified receptors in their assessments.

SIC and The Scottish Rights of Way and Access Society have identified the potential to improve the interconnections within the Site to facilitate pedestrian access. This will be discussed in Chapter 6: Socio-Economic, Tourism and Recreation Assessment. Formal and informal routes have been identified and mitigation measures to improve access for recreation will be defined.

#### **Traffic and transport**

SIC advised the consideration of the turbine manufacturer's haulage route guidelines and the support of evidence in photographic and video format to determine the state of the road network. Chapter 18: Highways and Transportation, will consider the Transport Assessment Guidance produced by Transport Scotland in 2012 to establish suitable routes for importation of turbine components.

#### **Roadmap for submission of the Environmental Statement (ES)**

It is the Applicant's intention to submit the Section 36 application and ES for Beaw Field Wind Farm in February 2016. As Appendix 1 details, the comments and advice received during the scoping process have been integral to progress the design for the Proposed Development together with ongoing consultation with key stakeholders and the local community. This process will continue throughout the pre-application process to ensure that a robust application and ES is submitted.

Notice of the application submission through appropriate advertisements will be issued circa week commencing 22<sup>nd</sup> February 2016, to be discussed and agreed in advance with the ECDU as part of the Gate Check 2 process. Once published the ES will be available for viewing at Burravoe Village Hall and the Shetland Island Council offices in Lerwick.



## Conclusion

Peel Wind Farm (Yell) Ltd welcomes any comments that the ECDU or statutory consultees may have in relation to this Gate Check 1 Report for the proposed Beaw Field Wind Farm. The Applicant also offers a round-table meeting, hosted and facilitated by the ECDU, to provide an opportunity for the statutory consultees to further discuss any issues they believe are not being adequately addressed.