

INTRODUCTION

ABO Wind UK Ltd (ABO Wind), on behalf of Barrel Law Windfarm Ltd, is seeking planning permission to develop Barrel Law Wind Farm (the 'proposed development') consisting of up to seven wind turbines with a total installed generating capacity of up to 24.5 megawatts (MW), located within the local authority area administered by Scottish Borders Council (SBC). The site centre is approximately at Ordnance Survey (OS) National Grid coordinates NT412178.

As the proposed development is considered a project likely to give rise to 'significant environmental effects', and in accordance with the requirements of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 (the 'EIA Regulations'), an Environmental Statement (ES) has been prepared to accompany the application for planning permission for the development.

This Non-technical Summary (NTS) provides an overview of the key findings of the ES.

In 2012 the applicant submitted a planning application for a wind farm comprising eight turbines with a maximum height to blade tip of 125m, sited at a different location at Barrel Law. That application was refused consent by SBC in 2013, and an appeal against refusal of the application was dismissed by the Directorate for Planning and Environmental Appeals in 2014.

The proposed development has been designed in light of those previous decisions and addresses the reasons for refusal of that scheme, as outlined in the Design and Access Statement accompanying the planning application.

PROJECT DESCRIPTION

Site Location and Access

The proposed development site is located on land at Todrig Farm and Whitslade Farm, 7km south west of Ashkirk, 3.5km north west of Robertson and 9km west of Hawick, in the Scottish Borders.

The proposed development site comprises moorland and rough grazing, currently used for sheep grazing and managed for seasonal game shooting. The Hyndhope and Alemoor Forest, a large commercial forest plantation predominantly comprising of Sitka Spruce, lies to the west of the site, through which access from the B711 will be taken using the existing access track to the operational Langhope Rig Wind Farm, located approximately 2km to the north of the proposed development.

No residential properties are located within the proposed development boundary. There are five residential properties within 2km, with the nearest inhabited residential properties over 1.2km from the nearest proposed turbine.

Principal Components

The principal components of the proposed development comprise:

- Up to 7 three-bladed horizontal axis wind turbines of up to 132m (metres) blade tip height, each nominally rated at up to 3.5MW;
- Crane hardstanding areas at each turbine location;
- Access tracks and turning heads;
- An electrical control building and a network of electrical and control cables buried underground;
- Borrow pits; and
- Temporary construction compounds and hardstanding areas.

Grid Connection

The grid connection would be subject of a separate planning application and would consist of a 33kV grid connection from the electrical control building to the off-site local grid network at the Hawick Grid Supply Point, approximately 9km to the south-east of the site. It is anticipated the off-site connection to Hawick could involve a combination of wooden pole overhead line and underground cable installations.

Construction

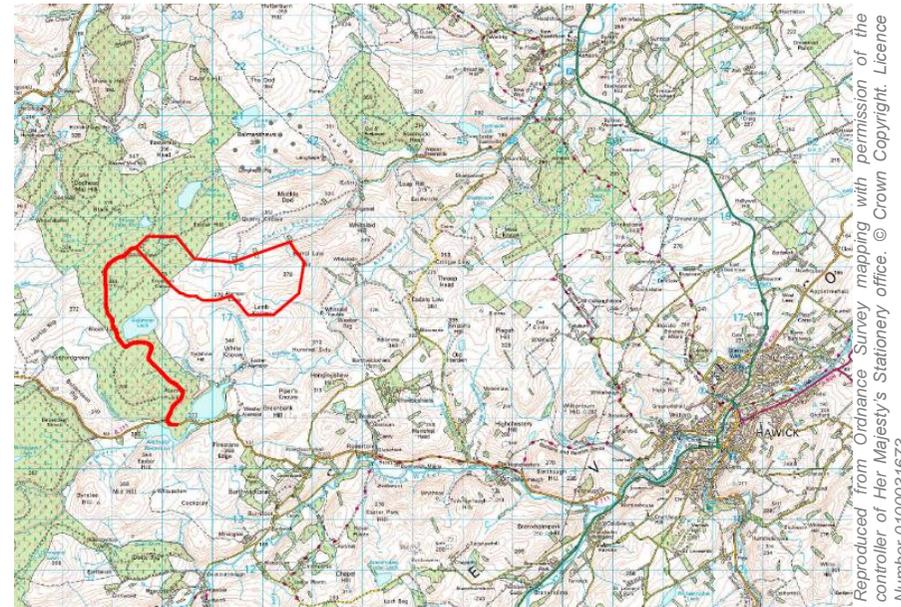
The main construction period is likely to last for a total of eight months, preceded by a six-month period for site investigations and detailed design work. A detailed Construction Method Statement would be prepared for the construction works and submitted to SBC for agreement prior to initiation of the works.

Construction activities and heavy vehicle access to the site would generally be from 07:00 to 19:00 on weekdays and 07:00 to 13:00 on Saturdays, unless otherwise agreed with SBC. This restriction would apply to the majority of materials to be delivered to the site.

Abnormal Indivisible Loads (large turbine components, such as blades and tower sections), would be delivered to the port of entry, assumed to be Grangemouth or Rosyth. From there they would be delivered to the site under Police escort, at times to be set by Police Scotland. A Traffic Management Plan would be put in place to control traffic impacts.

Operation

Once operational, the proposed development would require scheduled service visits approximately once or twice per week by operations staff in light vehicles. Extended visits for servicing, typically every six months, and unscheduled maintenance may also be required. It may be necessary to transport equipment and materials to the site during some maintenance works.



Proposed development site location shown in red (not to scale)

Decommissioning

On completion of its operational lifetime, anticipated to be 25-years, the proposed development would be decommissioned and the site restored to a standard required by SBC. A detailed Decommissioning Method Statement (DMS) would be prepared for the decommissioning works and submitted to SBC for approval prior to initiation of the decommissioning works. Preparation of the DMS near to the time of decommissioning would allow the operator to take advantage of advances in technology and best site practices at that time.

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PLANNING POLICY

The Scottish Government's policy framework for addressing climate change is the Climate Change (Scotland) Act 2009. The 2020 Routemap for Renewable Energy in Scotland set out the new target for renewable sources to generate the equivalent of 100% of Scotland's gross annual electricity consumption by 2020, equating to approximately 16 Gigawatts (GW) of installed renewable generation capacity. The 2015 update summarises that in 2014 renewable sources delivered 49.8% of Scotland's gross electricity.

The proposed development site is located within an "Area with the Highest Capacity" for wind turbines over 120m in height, as shown on Figure 6.4 Wind Turbine Development Opportunities and Constraints in the Scottish Borders Updated Wind Energy Capacity Study, May 2016, and in an "Area with Potential for Wind Farm Development" shown on Figure 6 Wind Energy Spatial Framework of the Draft Renewable Energy Supplementary Guidance (SBC December 2016).

ENVIRONMENTAL ASSESSMENT

The following technical assessments presented in the ES were undertaken by specialist EIA consultants:

- Landscape and Visual Amenity – Optimised Environments;
- Noise – Golder Associates;
- Cultural Heritage – Northlight Heritage;
- Ornithology and Ecology – RPS Group;
- Hydrology, Hydrogeology and Geology – ITP Energised;
- Traffic and Transport – WYG;
- Tourism, Recreation and Land Use – ABO Wind UK;
- Shadow Flicker – ITP Energised;
- Climate and Air Quality – ITP Energised; and
- Aviation and Telecommunications – Aviatca.

ABO Wind UK managed the EIA process and prepared this ES.

Landscape and Visual Amenity

The site is located between the hills of Barrel Law (384m Above Ordnance Datum (AOD)) and Ale Moor Craig (378m AOD). The boundary extends southwards to include the slightly lower knoll of Lamb Knowe (360m AOD), then turns towards Hummel Side (312m AOD) before extending in a north-westerly direction, following the high ground to the Ettrick Forest. Apart from an Ordnance Survey trig point there are no buildings or structures within the site area.

The study area (which is 40km radius from the outer turbines) contains three nationally protected areas comprising one National Park and two National Scenic Areas. There is one Wild Land Area, 21 Gardens and Designed Landscapes and ten local landscape designations. However, the proposed development is not located within any one of these areas.

There are six different landscape character types (LCT) which would experience high or moderate theoretical visibility of the proposed development. Of these, the development is located in the 'Dun Knowe Group' area of the 'Southern Uplands with scattered forest' LCT.¹

There are 22 wind energy developments that are currently operational, consented or in the planning process within the 40km radius cumulative study area.

A Landscape and Visual Impact Assessment (LVIA) was carried out to identify and record the potential effects that the proposed development may have on physical elements of the landscape; landscape character; areas that have been designated for their scenic or landscape-related qualities; and views from various locations such as settlements, routes, tourism features and other sensitive locations.

The assessment has shown that the effect of the proposed development on the landscape and visual resource of the great majority of this study area will be not significant, which means that in these areas the effect of the proposed development is not defining and the existing characteristics

¹ The Borders Landscape Assessment SNH Review No 112 (Ash Consulting Group, 1998)

of the landscape and views will continue to prevail. The assessment has also indicated that, in common with wind farm developments of this scale, there is potential for the proposed development to result in some localised significant effects on the area that lies in closer proximity to the site. The LVIA has indicated that significant visual effects are likely to be contained within approximately 7.5km of the proposed development, while significant effects on landscape character are likely to be contained within a radius of approximately 6km from the proposed development.

Noise

The proposed development lies in a rural area, however, the operational Langhope Rig Wind Farm lies 1.8km north of the proposed development. Therefore, the noise assessment has considered the proposed development on its own and cumulatively with Langhope Rig Wind Farm.

As part of the assessment, background noise was monitored at locations around the proposed development. There are several working farms and commercial forests in the surrounding area and agricultural noise from machinery and livestock is therefore a major component of the ambient noise environment. The noise assessment shows that the proposed development will be operated in such a way that operational noise levels remain within agreed limits set to protect amenity.

Cultural Heritage

There are no Scheduled Monuments or Listed Buildings within the proposed application boundary and no part of the development would lie within a Conservation Area, Garden and Designed Landscape or Inventory Historic Battlefield. Forty-one sites of cultural heritage interest have been identified within the proposed application boundary and a further forty-one sites were identified within 1km of the site boundary, excluding the access corridor.

Considerable design work was undertaken to minimise the direct effects on most of the known cultural heritage sites within the application boundary, and no significant effects are predicted. Potential for buried archaeological remains to be found on site during the construction process is considered to be low.

Of the statutorily protected cultural heritage sites within 10km of the proposed development a significant effect, including cumulative effect, on the setting of Kemp's Castle Settlements and Field System (SM4422) was identified. There were no other significant effects relating to the setting of cultural heritage sites, including cumulative effects.

Ecology and Birds

The predominant habitats within and immediately surrounding the development boundary are marsh/marshy grasslands, coniferous woodland, bog, bracken and dry and wet heath.

Some of the vegetation communities present have the potential to be groundwater dependent terrestrial ecosystems. Based on the underlying geology of the site, however, it is concluded that these vegetation communities are unlikely to be reliant on ground water influences.

The proposed development site is not located within any site with a statutory or non-statutory designation for nature conservation. The closest statutory protected areas designated for nature conservation are the River Tweed Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) and the Alemoor West Meadow and Loch SSSI. The River Tweed SAC is designated as a nutrient-rich river system, the most species-rich example of a river with water crowfoot beds in Scotland, and for Atlantic salmon, otter and three species of lamprey. The Alemoor West Meadow and Loch is notified for its diverse aquatic flora and invertebrate fauna, including the nationally scarce slender-leaved pondweed and, while it is not notified for any bird interest, the Alemoor West Meadow and Loch is considered a regionally important roosting, feeding and nesting area for a wide range of wildfowl and waders.

The bird species on site are typical of the upland habitats present, and generally comprise common and widespread species. Five species were scoped in for the ornithological assessment: black grouse, curlew, goshawk, osprey and red kite.

With mitigation in place, no significant effects are predicted for any important ecological features. Mitigation will include floating track design

over areas of deep peat, pollution prevention measures, best practice working in relation to watercourses, and sensitive working procedures for badgers, otters, reptiles and breeding birds (including lekking black grouse).

To compensate for the direct loss and change to bog habitats during the construction and operation of the proposed development, measures will be put in place to improve the quality of existing bog habitats within the site. Bracken management will be undertaken reduce its extent on and around the proposed development and encourage the re-establishment of heathland and upland grassland habitats. For black grouse, measures will be taken to minimise the risk of collision with wind farm infrastructure and turbine bases (by appropriate marking), and habitat enhancement will take place including planting of areas of native woodland and scrub.

Hydrology, Hydrogeology and Geology

The proposed development is located within the River Tweed catchment area. Several small burns flow in and alongside the proposed development site. The main watercourse is the Todrig Burn, which is located to the north of the proposed development site boundary. Other watercourses that surround the proposed development site include Hog Burn, Bleakhill Burn and Ale Water.

A review of British Geological Survey mapping indicates the site is underlain by impermeable bedrock of the Hawick and Gala Group with limited groundwater in the near-surface weathered zone and secondary fractures. Glacial clay and thin peaty soils lie on top of the bedrock. Only one area of deep peat was recorded during peat depth surveys, located in the western part of the site. Given the impermeable nature of the bedrock and the covering of glacial clay, it is considered that there are no groundwater dependent terrestrial ecosystems present. An assessment of the risk of peat slide has shown that there is negligible risk across the majority of the site. There are no Private Water Supplies located within the proposed development site boundary.

Effects on water quality and quantity in water courses and shallow groundwater will be mitigated by appropriate site layout, best practice construction methods and site management practices. Effects on the

area of deep peat identified in the west of the proposed development site will be mitigated through use of floating tracks to avoid any requirement for excavation. Effects on shallow peaty soils will be mitigated through careful storage and reuse. No significant effects on the local watercourses, shallow groundwater or the River Tweed catchment are predicted.

Traffic and Transport

Access to the proposed development site would be taken by way of an existing priority junction with the B711 located some 5km to the west of the settlement of Roberton. The vast majority of traffic will be normal construction plant and most will arrive on site on low loaders. The turbine components will arrive on specialist transport vehicles. Two large self-propelled cranes would be used to erect the turbines.

The turbine delivery route could be taken from a suitable port of entry such as Grangemouth or Rosyth. The route is indicative and subject to final turbine selection but would potentially follow the Central Scotland motorway network to the A720 Edinburgh City Bypass eastbound; leave A720 and turn left onto A68, continue on the A68 for 60km; turn right onto A698 then B6399 High Street; Hawick, turning left onto the A7 and then right onto the B711 at Martin's Bridge before turning right after approximately 10.5km into the proposed site access. Delivery of the turbine components would take place with Police escort and at times to be set by Police Scotland.

A detailed traffic and transport assessment, including swept-path analysis was undertaken, which identified a number of constraint points at which mitigation, including relocation of street furniture, localised widening and clearance of vegetation may be required, potentially as part of separate planning application.

Following the assessment, the only residual effect considered to be significant would be a potentially moderate effect on pedestrian amenity on the B711, arising due to the increase in the number of HGV movements during the temporary construction phase. However pedestrian flows are low in the area so the number of people that could be affected is likely to be minimal.

Traffic impacts will be minimised through development of the Traffic Management Plan covering the movements of abnormal loads and general construction traffic.

Tourism, Recreation and Land Use

The current principal land use at the proposed development site is rough grazing for sheep on open moorland, seasonal game shooting and commercial forestry along the access track. The site is not classified as having prime agricultural capability.

None of the top 20 most-visited tourist attractions in Scotland, as listed by VisitScotland, is located within the 10km study area for tourist attractions. The 'Heart of Hawick', one of the top five visitor attractions in the Scottish Borders, is within the study area, but no tourist attractions, or any tourist accommodation, would experience a significant impact from the proposed development.

Core paths, cycling paths, horse riding paths, and long-distance walking paths including the Borders Abbeys Way, Romans and Reivers Route and Cross Borders Drove Road, fall within 10km of the proposed turbine locations. Several Rights of Way, the Romans and Reivers Route and the Borders Loop cycle route where they follow the B711 road, are located within 5km study area. Approximately 1.2km of Right of Way BE132 follows the existing Langhope Rig Wind Farm access track through Hyndhope and Alemoor Forest, which would be used for the proposed development. No significant effects on recreational use of the local path networks are assessed.

A path planning study will be implemented to ensure Right of Way BE132 is maintained in a safe and open state throughout the lifetime of the proposed development. A Traffic Management Plan will be implemented to mitigate any potential effects on non-motorised users of the local road networks for recreation-based activities. Effects on the recreational use of Alemoor Reservoir and Woll Golf Course would not be significant.

Shadow Flicker

Three inhabited residential properties lie within the 2km study area for shadow flicker. The assessment concluded that there would be no significant shadow flicker effects created by the proposed development, either in isolation or in combination with other operational or consented wind farm development, including Langhope Wind Farm located approximately 2km to the north of the proposed development.

Climate and Air Quality

Calculations were undertaken to quantify both the greenhouse gas emissions associated with the proposed development and the emissions resulting from the proposed development itself. It is estimated that any emissions associated with the proposed development will be offset within the first year of operation. Thereafter the proposed development would make a positive contribution to the Scottish carbon reduction targets.

Assessment of the potential for adverse effect resulting from emissions from construction traffic was undertaken with reference to appropriate screening criteria. Traffic movements are substantially below the levels considered likely to cause adverse air quality effects, therefore the effect of emissions was considered not significant.

Aviation and Telecommunications

The existing aviation and defence environment has been determined from the published aeronautical charts and data on radar locations and coverage. Nine aviation radars are identified as falling within the 100km radius study area and the proposed turbines will be in line-of-sight of the RAF's new-generation air traffic control radar at Deadwater Fell, which will offer full mitigation of wind farm effects from 2019. The proposed development site lies 15km from Midlem private airstrip, and is located in Low Flying Area 20(T), part of the UK Military Low Flying system.

The proposed development site lies 19km from Eskdalemuir seismic monitoring station and, therefore, outside the proposed 15km exclusion zone.

The existing telecommunications environment was determined from a map search and consultation with Ofcom, which confirmed there are no potentially affected telecommunications facilities in the area. Terrestrial television subscribers in the area receive their signals from the Selkirk transmitter, 8.5km north east of the proposed development site.

Following assessment, no aviation or telecommunications receptor is predicted to experience residual significant effects.

Consultation

Consultation has played an important role in the design process of the proposed development. Consultation has been carried out with a wide range of parties including political and community stakeholders. The aim was to ensure that their views have been sought and taken into account in the development design process. Important issues to be addressed in the ES were identified as a result of this consultation process.



Public Exhibition held at Roberton on 23 March 2017

Public Exhibition

ABO Wind presented its plans for the proposed development to the public at an exhibition held in the Forman Memorial Hall, Roberton on 23 March 2017. A total of 19 local residents and community stakeholders attended the public exhibition and were able to view the information and materials on display. Feedback forms were made available to exhibition attendees, offering the opportunity to record their opinions on the proposal. The completed surveys were subsequently analysed, and comments received were considered in the wind farm design process.

Local Investment and Employment

In the case of the proposed development, local spend could amount to approximately £8m investment into the Scottish Borders economy, both as direct spend (i.e. the cost of construction), which would include sizable construction contracts which could be let locally depending upon contractor capability, and other opportunities for businesses in the local supply chain such as plant hire, quarry stone, electrical equipment, professional services, concrete, fuel, temporary welfare facilities, metal fabricators, labourers, machine operators and hauliers. Local indirect spend (i.e. generated from the direct spend), could include food and temporary accommodation for the workforce.

A number of employment opportunities would be generated during the construction, operational and decommissioning phases of the proposed development, as follows:

- Typically around 30 staff and operatives would be employed during the main construction phase;
- A small number of staff would be required to operate and maintain the development during the operational phase; and
- Staff would also be required during the decommissioning phase, although numbers are likely to be lower than during construction.

Some of the positions would be of a specialist nature and may require skills that are not available locally. The remaining positions would offer employment opportunities to the local community.

Community Benefit

ABO Wind is committed to either contributing annual payments, related to the eventual installed capacity, into a community benefit fund, and/or forming a shared ownership structure for the proposed development, depending on the preference of the community. Should planning consent be granted for the proposed development, ABO Wind would engage with local community representatives to discuss the establishment of a community benefit fund and/or shared ownership offering.

ABO Wind encourages local communities to decide for themselves the purpose and management arrangements of the community benefit, as far as possible. To assist in structuring these arrangements, ABO Wind would set up a Community Liaison Forum, where local community representatives could decide the best way forward to meet the needs of the community and work with ABO Wind on establishing their community benefit package.

FURTHER INFORMATION

The ES is available for inspection throughout the consultation period at:

- **Scottish Borders Council**, Bowden Road, Newtown St Boswells, TD6 0SA.

In addition, copies will be distributed to:

- Hawick Public Library
- Selkirk Public Library
- Lilliesleaf, Ashkirk and Midlem Community Council
- Upper Teviotdale and Borthwick Water Community Council
- Ettrick and Yarrow Community Council
- Hawick Community Council

The ES will also be available for viewing on the SBC website:

https://www.scotborders.gov.uk/info/20050/planning_applications.

Further hard copies of the ES are available at a cost of £975. Digital copies of the ES on CD are also available at a cost of £25.

This NTS is available free on request to ABO Wind UK Ltd, or can be downloaded from the SBC website planning portal or the Barrel Law Wind Farm website: <http://www.barrellawwindfarm.co.uk>.

To obtain a copy of the ES or NTS, please contact:

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Please note that any representations on the planning application should be made directly to Scottish Borders Council.

ABO Wind UK Ltd, September 2017