

## Environmental and Social Data Sheet

### Overview

Project Name:	<i>MIDDLE MUIR ONSHORE WIND FARM</i>
Project Number:	<i>2017-0446</i>
Country:	<i>UK</i>
Project Description:	<i>51 MW onshore wind farm in Scotland (UK), including wind turbines, balance of plant and interconnection to the grid. A sub-operation of the Santander UK Renewable Energy Framework Loan (2013-0060)</i>
EIA required:	yes
Project included in Carbon Footprint Exercise <sup>1</sup> :	yes

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

### Environmental and Social Assessment

#### Environmental Assessment

The project falls under Annex II of the EIA directive, and in this case it was screened in by the competent authority, as the capacity is higher than 50MW. The project was therefore subject to EIA process under the Electricity Act.

The planning application was submitted to both South Lanarkshire Council and the Scottish Government in January 2012, and was granted planning permission in September 2014.

The Development, comprising 15 wind turbines, is located approximately 2.5 km north-west of Crawfordjohn and lies within the South Lanarkshire local authority area. The site is located in open moorland for agricultural grazing, with large mature commercial forest plantation along the western boundary.

The most significant impacts during construction and operation are the usual ones for this kind of technology: the visual impact on the landscape, the impact on the natural heritage, the noise impact and the impact on nearby air traffic control radars.

The location is classified as zone 2 (medium sensitivity area), as per the catalogue of 'Zones of Natural Heritage Sensitivity of Scotland', mainly due to the proximity of a protected area (2 km Northeast), "*Muirkirk and North Lowther Uplands Special Protection Areas (SPA)*", designated because of its importance for its breeding and non-breeding birds, specifically breeding golden plover, hen harrier, merlin, short-eared owl and peregrine, and wintering hen harriers. An appropriate assessment has been carried out, as part of the EIA process, confirming that there are no significant impacts on Natura 2000 sites.

Concerns over this project were received by Scottish Natural Heritage (SNH), the Royal Society for the Protection of Birds (RSPB) and the Raptor Study Group (RSG),

---

<sup>1</sup> Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO<sub>2</sub>e/year absolute (gross) or 20,000 tons CO<sub>2</sub>e/year relative (net) – both increases and savings.

Luxembourg, MC decision: 16.04.2018

highlighting the proximity of the SPA and the potential cumulative effects of other nearby wind farms, as well as the suggestion to carry out further surveys over an area where short-eared owl and raptors had shown indication of breeding attempts. Pre-construction breeding bird surveys were undertaken and a Bird Monitoring Plan is being carried out on the site of the wind farm during the works. Moreover, the timing of works during the spring months will mitigate potential disturbance effects on lekking black grouse. The ornithology assessment concluded that no significant effects on birds are predicted as a result of construction and operating the wind farm either alone or in combination with other nearby windfarms. In any case, a Breeding Bird Protection Plan will be implemented. Cumulative impact assessment was carried out under the EIA process, considering other built or consented developments in the area. The concerns from the NGOs were finally resolved, and as a consequence of the consultation process the sponsor has made an amendment to the site layout, reducing the number of turbines from 19 to 15.

Similarly, close to the area (in the valley of the Black Burn river) there is another SPA, Red Moss, a habitat priority, according to Habitats Directive, code 7110, called Active raised bog. Nevertheless, a 500 m standoff was placed around the Red Moss to ensure an adequate separation with the wind farm was maintained. Besides, the implementation of a Habitat Management Plan (HMP) will compensate for one-time loss of ecological important habitats, so the surface of these habitats will be increased with respect to the current baseline status, which will also benefit the black grouse.

Additionally, moderate peat deposits were identified in the northern area of the Project. Preliminary assessments have established that the peat risks are manageable for a competent contractor. Anyway, a peat management plan has been prepared to ensure the peat stability.

Noise studies concluded no risk of noise impact at properties in the vicinity of the turbines as a result of construction and operating of Middle Muir wind farm either alone or in combination with the nearby wind farms (Andershaw and Glentaggard wind farms were also included in the noise study). In any case, noise monitoring will be carried out during works and operational phases.

Regarding the impact on nearby air traffic control radars, pursuant to the planning condition, the Project Company agreed to a primary radar mitigation scheme to diminish the impact of the wind farm on nearby air traffic control radar. The mitigation measures include blanking of radar coverage at the affected radar at Lowther Hill and providing infill radar feed from Glasgow Airport.

Regarding the cultural heritage impacts, there are 6 archaeological sites located within the area of the wind farm inventoried as "National Monument Record of Scotland". However, sites and features of archaeology and cultural heritage have been avoided to ensure that they are preserved in situ. Archaeological sites are located close to the wind farm, but none of the components of the wind farm are located on them. Additionally, one kilometre standoff was imposed around Auchensaugh Cairn located at the northern boundary of the study area, to minimise impact on setting. Where appropriate, sites have been either entirely fenced off or visibly marked-out to prevent accidental damage occurring to the remains during construction activities in the vicinity. Although the likelihood of encountering unrecorded archaeological remains during excavation works is low, a Programme of Archaeological Works has been agreed by the West of Scotland Archaeology Service.

There are a small number of significant predicted impacts remaining. One of them is the landscape and visual effects due to the nature of wind turbines, but these are localised and limited to a relatively small area surrounding the site. The other one is the construction noise due to the requirement to construct an access track in close proximity to residential properties. Nevertheless, the authorities determined that all of these problems could be

Luxembourg, MC decision: 16.04.2018

addressed appropriately through mitigation plans or, if a residual impact remained, it would be within acceptable levels and would be offset by the benefits of the development.

- Middle Muir wind farm is currently under construction, which is expected to be complete early 2019, being operational at the end of 2018.
- The promoter is deemed to have adequate experience and able to implement the local regulations and the EIB's Environmental and Social standards.

### **Public Consultation and Stakeholder Engagement**

The promoter requested a scoping opinion from the Scottish Government's Energy Consents Unit in May 2011 in relation to Middle Muir Wind Farm. The responses received from the statutory consultees during this process have been taken into account throughout the design iteration and EIA process.

These consultations have continued throughout the EIA process. As a consequence of the post-submission consultation the Sponsor has made a reduction in the number of turbines from 19 to 15 with turbines T12, T14, T16 and T17 being removed from the layout.

Public exhibitions were held in June 2011 at Crawfordjohn and Glespin. These exhibitions were advertised in the local newspapers and notified by post to the bodies concerned. They featured panels and brochures describing the EIA process and the proposed development and provided examples of possible views of the site using photomontage. Most of the attendees were in favour of the Development with some reservations, concerns regarding the scale of the Development, its location in proximity to Crawfordjohn and the fact that too many wind farms were proposed or operational in the area. The Developer has taken these comments into account in the evolution of the Development. Besides, Duneaton and Douglas community councils have been and are engaged in discussion regarding the wind farm.

Lands are private and voluntary agreements with the owners were reached.

### **EIB Carbon Footprint Exercise**

The wind farm is expected to produce an average of ca. 124.6 GWh/a, and will not generate any absolute CO<sub>2</sub> emissions. Overall, the project will result in relative emissions of minus 71.6 kt CO<sub>2</sub>-e/a (i.e. savings of 71.6 kt CO<sub>2</sub>-e/a). For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

## **Conclusions and Recommendations**

The project's allocation will require that the promoter will provide the Bank with a copy of the last E&S monitoring construction report.

Based on the information available and subject to the proposed condition, the project is acceptable for Bank financing.