EXECUTIVE SUMMARY

Introduction

This executive summary presents a synopsis of the assessments contained within the Environmental Report for the Mynydd Pencarreg Wind Turbines.

The Applicant, Energiekontor, was founded in 1999 as a subsidiary to the German based company Energiekontor AG, and operates 8 wind farms in the UK, with a number of other wind and solar projects at various stages of the development.

The Proposal

The Proposed Development consists of 2 wind turbines up to 125m to tip on land at Mynydd Pencarreg, north of Rhydcwmerau, Carmarthenshire. The wind farm would provide up to 5MW of installed capacity depending on the final turbine model. Other infrastructure elements proposed include new/upgraded tracks, an upgraded site entrance, hardstandings for crane pads, a substation and a temporary construction compound.

The Site is generally characterised by upland grazing agricultural land to the north, with a more enclosed valley character to the south.

Screening and Environmental Report

An EIA Screening Request was submitted to Carmarthenshire County Council (CCC) in October 2020. CCC has confirmed that the Proposed Development is not considered EIA Development.

The Environmental Report (ER) describes the wind turbine development, the nature of the site and its surroundings, the potential effects of the Proposed Development on the local environment and the measures proposed to lessen or mitigate any potential effects identified.

Site Selection

The Applicant began a study to identify potential wind farm sites throughout the UK in 2002. The study aimed to identify the locations where the siting of a wind farm would result in minimal environmental effects.

This study involved a review of the planning context for renewable energy in Wales, a GIS mapping exercise, a review of wind speed data, a review of the electricity supply network; and an evaluation of alternative locations.

Site Design

The Site design has been optimised to produce a project which balances the use of land available with the overall effects of the Proposed Development.

The design has been undertaken over a prolonged period and has been progressively revised and refined during this time to take account of the information arising from previous planning applications and the findings of various environmental assessments.

Policy and Consultation

Needs and Benefits

The proposed development is being bought forward in response to the need to combat climate change, reduce carbon dioxide emissions and change the way in which the UK secures its energy supplies for the future.

Community Consultation

Due to current restrictions on public gatherings due to the COVID-19 crisis, and in line with regulations[1], public engagement and consultation for this application was carried out through alternative means, including online. Downloadable documents for the project, both at the pre-application and application stage, are hosted on the following website https://www.energiekontor.co.uk/our-projects/mynydd-pencarreg.

There is an extensive planning history associated with proposals to develop turbines at the Site. This history has included rounds of public consultation and planning applications, all of which has influenced the design of this

[1] The Planning Applications (Temporary Modifications and Disapplication) (Wales) (Coronavirus) Order 2020

Proposed Development. In addition, as part of this Proposed Development the Applicant has undertaken the following consultation activities;

- the launch of the project website, with detailed information on the Proposed Development, contact information, ability to comment or support the proposal; and
- Contact made with Llanybydder and Rhydcymerau Community Council and other key stakeholders notifying them of the online exhibition.

Chapter 4: Landscape and Visual Impact (LVIA)

An LVIA has examined the likely effects of the proposed turbines on landscape character and visual amenity within a 15km radius of the site (the study area).

An assessment of visual amenity concluded that at least 1 turbine would be visible from approximately 33.5% of the study area and neither wind turbine would be visible from the remaining 66.5%. The majority of views would be limited to areas of high ground. This is based on the Zone of Theoretical Visibility, which presents a worst case scenario as it does not take into account intervening screening, such as hedgerows, woodland or manmade structures such as buildings.

Ten viewpoints were assessed, ranging from close proximity to more distant views, including the Brecon Beacons National Park. Conclusions from these assessments were that the visual impacts of the proposed turbines on visual amenity are likely to be greater within close proximity to the site.

A cumulative visual assessment was also carried out. This assessed a number of approved and submitted wind farm schemes within the 15km study area. This concluded that from all of the viewpoints assessed, cumulative impacts would be not significant. This is due to either the cumulative schemes not being within view, the proposed turbines likely to be imperceptible, or the cumulative schemes being visible but not dominating the view.

The proposed turbines would not significantly alter the character of the landscape as a whole. Overall, the topography and character of the site

and landscape lends itself to a two turbine scheme of the form and scale proposed.

A residential visual amenity assessment concludes that no residential property would experience changes in visual amenity that would result in unacceptable adverse living conditions for its occupants.

Chapter 5: Historic Environment

An assessment of the potential effects of the proposed turbines on the historic environment has been undertaken. This included an assessment of both direct physical impacts and indirect impacts on settings.

No known non-designated archaeological heritage assets would be affected as a result of the Proposed Development.

No direct physical effects on any designated heritage assets, including listed buildings and scheduled monuments, would arise from the Proposed Development.

Chapter 6: Ecology and Nature Conservation

The ecology assessment reports on the ecology of the site and its environs, and assesses the construction and operational phases of development. The assessment utilised both historic records and on-site fieldwork.

The site itself is located in a mixed landscape of improved and poor semi-improved pasture, interspersed with (often small) areas of unimproved marshy grassland, bog and flush.

Moderate (though non-significant) adverse effects remain for the area of neutral grassland (TN3) and the area of wet heath and wet heath/acid grassland mosaic (Turbine 2 and associated track). Even though, the assessment concludes that without habitat enhancement there would be no significant adverse effect on ecology, habitat enhancement is proposed that would compensate for any loss.

Chapter 7: Noise

In accordance with industry guidelines relating to wind turbine noise (ETSU-R-97) a noise impact assessment has been undertaken.

Predictions of wind turbine noise have been made, based upon a sound power level for a Senvion MM100 machine.

The noise assessment concluded that when considering the proposed wind turbines in isolation, predicted levels do not exceed a level of 35 dB LA90 at any non-involved dwelling. Therefore, the wind turbines are considered acceptable in isolation.

Similarly, when considering the proposed wind turbines with the proposed turbine south west of Bryn Dafydd, no cumulative effects are predicted.

Chapter 8: Shadow Flicker

Wind turbines can cause 'shadow flicker' under certain circumstances, when the sun passes behind a moving blade and casts a shadow on the window of a property.

A shadow flicker assessment has been carried out for properties that lie within 1km (10 x rotor diameters) of the wind turbines. Five dwellings were identified within these parameters: Esgairliving, Tahrhiw, Caermalwas Fawr, Bwlch Caermalwas Fach and Cefnblaenau.

Specialised computer software (WindPro) has been used calculate shadow flicker. It was concluded that only two of the dwellings are predicted to experience any shadow flicker effects under a worst-case scenario, and that the frequency of potential occurrence would not be considered significant .

Chapter 9: Traffic and Transport

An assessment of the predicted effects of the Proposed Development on transport and access receptors has been undertaken.

The Proposed Development would lead to an increase in traffic volumes on a number of roads in the vicinity of the site during the construction phase. During the busiest month, an average of 18 HGV movements per

day are predicted, along with an estimated 6 car and light van movements per day. Traffic volumes would fall off considerably outside the peak construction period.

No significant capacity issues are expected on any of the roads within the study area as a result of the development, as background traffic flows are very low and the links are of reasonable standard.

Traffic levels during the operational phase will be one or two vehicles per week for maintenance purposes. Traffic levels during the decommissioning phase are expected to be lower than during the construction phase.

The movement of abnormal loads would require some mitigation/remedial work at three potential constraint points and at the Site access. Also a police escort would be required. With the implementation of appropriate mitigation, no residual impacts of significance are anticipated in respect of traffic and access issues.

Chapter 10: Geology and Hydrology

The geological and hydrological assessment presents information related to surface water, ground water, flood risk, land drainage and infrastructure.

The Proposed Development is not at significant risk of flooding from any source.

During operation of the Site, impermeable areas at the Site will marginally increase, and thus any increase in the rate and/or volumes of surface water runoff from the Site will be negligible.

The operational effects of the Proposed Development on water resources are considered to be negligible.

Potential effects on the water environment through the construction phase would be mitigated by a range of operational, control and monitoring measures. These would significantly reduce the risks to the identified receptors and the residual significance of environmental effects on the water environment is considered to be not significant.

Chapter 11: Socio-economics

An overview of the likely effects of the wind turbines on tourism and the socio-economics of the area was carried out.

Potential tourist attractions within the local areas have been identified, and in order to evaluate potential effects on these, reference was made to surveys which have looked at the effect of wind farms on tourism in the UK.

The Review of Energy Policy in Wales by the Economic Development Committee states that there is no objective evidence available to show whether wind turbines increase or decrease tourist interest in an area. It goes on to say: "*There have been several different surveys in other areas which generally report that the majority of people are not influenced one way or another by the presence of windfarms*".

Tourists can be expected to react to wind turbines in the same manner as any other member of the public, and the presence of a wind energy scheme does not result in tourists avoiding an area and there is no evidence that renewable energy schemes detract from tourism interests.

There would be opportunities and benefits for local business created during the construction, operational and decommissioning phases, including construction jobs and sourcing of materials.

Chapter 12: Infrastructure and Safety

The infrastructure and safety assessment considers the potential effects on infrastructure, telecommunications and aviation.

Modern wind turbines are designed and manufactured to withstand the most extreme weather conditions which arise in the UK in terms of wind speeds, turbulence and temperature.

Where it is proved that the operation of the Proposed Development could have an impact on the level of television reception received, it is expected that the Applicant will provide mitigation and remedial work, which Is usually undertaken pursuant to a planning condition. With regards to communication link operators, no objection was raised as part of

previous rounds of consultation and it is predicted that interference is not a concern, therefore it is anticipated that mitigation is not required. Consideration has been given to the potential for effects on military and civilian aviation. It is considered that there would be no likely effects on aviation infrastructure as a result of the Proposed Development