

Place Directorate

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 Our Ref: Knockodhar
 Your Ref: ECU00002153
 Date: 29 January 2021



Magnus Hughson
 Energy Consents Unit
 5 Atlantic Quay
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 Glasgow
 G2 8LU
By email

Dear Magnus,

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 EIA Scoping Report (October 2020)

SITE ADDRESS **Proposed Knockodhar Wind Farm, 3.5km south west of Barr, South Ayrshire**

PROPOSAL: **Construction and operation of Knockodhar Windfarm comprising up to 32 wind turbines to tip height of 200m (with energy generating capacity of up to 179.2 MW) and proposed energy storage facility and associated infrastructure (Application to be submitted to ECU under S36 of the Electricity Act 1989)**

Thank you for your email of 30 October 2020 inviting South Ayrshire Council's response as a consultee to the scoping opinion received by Scottish Ministers from Savills on behalf of REG Knockodhar Limited. I acknowledge with gratitude your agreement to extend the period for issuing our Opinion. In keeping with the breadth of environmental topics acknowledged within the applicant's Scoping Report, South Ayrshire Council has consulted internally with various departments whose respective remits pertain to those topics. The various responses to that intra council consultation are contained in the enclosed Annex and to avoid duplication their collective content forms an integral part of South Ayrshire Council's consultation response. A response has yet to be received from the Ayrshire Roads Alliance; however, I can confirm that this shall be forwarded on when available.

In addition to the observations and suggestions regarding scope and methodology contained in the Annex, South Ayrshire Council would particularly like to bring to the applicant and ECU's attention the publication of the revised South Ayrshire Landscape Wind Capacity Study. The updated version is dated August 2018 and is available on the Council's website. Accordingly, we would request that the assessment within the LVIA chapter of the EIA Report addresses and references the relevant findings of the 2018 Study amongst the sources it draws from, and that any mitigation/design response to the same is clearly articulated.

I trust the above feedback to be of assistance and note that notwithstanding the foregoing and attached, South Ayrshire Council's response at this juncture is confined to the technical parameters of the sufficiency of scope as regards EIA – and is strictly without prejudice to the authority's future partial consideration as to the actual merits of the proposal of the proposal upon its anticipated consultation, in due course, at S36 application stage.

Yours faithfully

Mr Alastair McGibbon
Supervisory Planner, Priority Projects

Carol Anderson Landscape Consultant

The Scoping Report sets out the methodology and scope of the Landscape and Visual Impact Assessment (LVIA). I am in agreement with the methodology to be adopted for the LVIA and with the Study Area being defined as 45km from the proposal.

The proposed development site largely lies in an area of forest. Detailed consideration should be given to the landscape and visual effects of felling and restocking proposals (both adverse and beneficial) in the LVIA and mitigation and landscape enhancement should be optimised in the design of any Wind Farm Forest Plan and/or compensatory planting. Proposed forest felling areas should be shown in relevant visualisations from nearby LVIA viewpoints.

In respect of valued landscapes, I am in agreement that effects on the Merrick Wild Land Area should be assessed in detail in the LVIA. NatureScot have recently issued *Assessing Impacts on Wild Land Areas – Technical Guidance* (October 2020) and this should be used in the assessment. The Scenic Area designation in South Ayrshire has been replaced by Local Landscape Areas (LLA) and potential effects should be considered in detail on the special qualities and character of the *Stinchar Valley, Girvan to Ballantrae Coast and Hills* and the *High Carrick Hills* LLAs. Citations and boundaries for these LLAs are available from South Ayrshire Council.

A detailed ZTV should be provided in the EIA-R based on an OS 1:50,000 scale map base within 15km of the proposal to allow more accurate appraisal of potential visibility. The representative viewpoints shown on the ZTV and listed in the Scoping Report should be supplemented with an additional viewpoint from:

- The B7027 east of Barrhill in the upper Duisk Valley OS ref 226141E 579143N

Consideration should also be given to visibility and key views from the Barr Trails recreational routes in the Stinchar Valley (in addition to the Core Paths and other recreational routes noted in 8.2.13 of the Scoping Report. Sequential effects on the A714 and railway line should also be considered.

Lighting effects should be assessed from each of the representative viewpoints and not just from the viewpoints selected to illustrate night-time effects. Effects on the Dark Sky Park should be additionally assessed. While the character of the landscape is not readily discernible during hours of darkness, lighting can affect perceptual qualities associated with landscape character and it is recommended that the effect on the sense of seclusion and naturalness (due to existing low lighting levels) are considered in the LVIA. These qualities should be addressed even if the viewpoint does not lie within the Dark Sky Park Core Area. The cumulative effects of lighting should be considered in relation to the nearby Clauchrie, Craiginmoddie and Carrick wind farm proposals.

Other proposed wind farm developments to be considered in the cumulative LVIA should be confirmed with South Ayrshire Council once an assessment cut-off date has been established. Potential significant cumulative effects are likely to arise on character and views from the Stinchar and Duisk Valleys. A key consideration in the assessment should be the visual relationship of the proposal with nearby wind farm developments which comprise smaller turbines.

South Ayrshire Council Environmental Health

Point 1 (impact on Private Water Supplies) is required prior to planning consent being granted.
Points 2 and 3 are required should consent be granted

The following comments and representations should be complied with to satisfy Environmental Health:

1. Impact on Water - PRIVATE WATER SUPPLIES

The development should not adversely affect the private water supplies in the area

The EU Water Framework Directive (2000/60/EC).

The EU Drinking Water Directive (98/83/EC)

(The Private Water Supplies (Scotland) Regulations 2006 and the Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017.)

The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017

The Housing Act 1987 Sect. 86, The Water (Scotland) Act 1980 (The Act),

Protecting private water supplies during forestry activities – Guidance www.Forestrywaterscotland.com

A report is required detailing how existing supplies will be maintained both qualitatively and quantitatively and sources and connections not adversely affected.

a) Prior to consent being granted, a water management plan covering water control and the means of drainage from all hard surfaces and structures within the site shall be submitted for approval of the planning authority and following approval shall be implemented by the company. For the purposes of this condition “hard surfaces” includes internal access tracks, construction and lay-down areas, turbine pads and crane pads. The details to be submitted shall include the means of protecting surface water and ground water and controlling surface water run-off. The management plan as approved shall then be implemented in full.

Reason: To minimise impacts on groundwater quality and hydrology.

b) The applicant shall submit to the planning authority a site-specific hydrogeological report (not desk top study), which contains a review of the risks to all private water sources, their catchment areas, and the supplies, that have the potential to be affected by the development. Work shall not commence on site prior to the written approval of the Planning Authority being obtained.

The report should include a field assessment of all private water sources and supplies and their catchment areas, and focus on the effects of the development on the quality and quantity of water supplied to all private water users both within and out-with the boundary of the proposed site that have the potential to be affected by the development.

A conceptual site model should be included as this is key to developing a robust assessment of all risks to all potentially affected private water supplies. Attention should also be given to possible leachate generation at any Borrow Pit excavations.

c) Forestry – Removal, Harvesting, Replanting, Compensatory Planting:

All Private Water Supply user properties, their Private Water Supply source uptakes and catchment areas to be identified and shown as marked on maps, to scale, on minimum of 1:25000, in order to assess risk to catchment areas of the sources drawn from. This is to give realistic comparison to the siting’s of the proposed construction, turbines, structures, over ground / underground, access tracks etc.

d) Emergency Action Plan

An EAP should be submitted stating clearly who would be responsible, when they would be required to take action; where this would be implemented and what action and mitigation will be implemented for any

emergencies arising. The EAP should detail who the emergency contacts would be 24/7, with contact telephone numbers and email addresses, to be provided to PWS users and South Ayrshire council planning department.

Reason: In order to maintain a secure and adequate quality water supply to all properties with private water supplies that may be affected by the development.

Reason: To minimise impacts on groundwater quality and hydrology.

e) Specific concerns relating to private water supplies are as follows:

Following perusal of these plans the comments and representations I would advise that:

The EU Water Framework Directive (2000/60/EC).

The EU Drinking Water Directive (98/83/EC)

The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017

The Private Water Supplies (Scotland) Regulations 2006

The Water Supply (Water Quality) (Scotland) Regulations 2001

Protecting private water supplies during forestry activities – Guidance www.forestrywaterscotland.com

The Housing (Scotland) Act 1987 – section 86

I have read through the scoping submission for Knockodhar Wind Farm, and am of the opinion that not enough information has been provided, and ask for further information to be provided.

I note that the application is “planned to have an operational life of 35 years”.

The Development could pose the potential to have adverse and possible irreversible effects, and be unacceptable or incompatible with Private Water Supplies and their often-wide catchment areas feeds.

South Ayrshire Council Environmental Health Department are the enforcing agency for Private Water Legislation within South Ayrshire council local authority.

Under the above legislation landowners, contractors and persons have Duty of Care under the above Regulations, which state “that a person must not take any action which has the effect of allowing deterioration of the quality of the water”, this being Regulation 16, and non-compliance is an offence, and enforcement action can be taken.

There are habited land areas within South Ayrshire Council Authority boundaries that do not, and probably never will have the opportunity to access mains water.

There is no decisive indication of the proposed access entry route to the proposed Knockodahr Wind Farm site, and as such further information is required to assess potentially affected private water supply properties.

There are other private water supply properties out with the marked boundary on the map which are not listed in the table 12.4: Private Water Supplies within the Study Area, Scoping Report, Knockadhar Wind Farm, and which the development potentially could cause concern with regard to potential contamination of private water catchment source areas.

I note in Table 12.5: Summary of Value of Geology (including Peat and Ground Conditions), Hydrology (including Flood Risk) and Hydrogeology Receptors, that the private water supplies, as stated in the Scoping Report Table 12.4 along with others considered to be for “Water use supporting human health and economic activity at household/individual business scale is considered to be of low risk.

Under the Scottish legislation, if a property does not have a suitable potable water supply then the property is classed as below tolerable standard, and Environmental Health may be forced to take action to close or have them demolished as appropriate. There would be no recourse to connect to mains water for most of the properties listed and unlisted.

Blasting and quarrying has the potential to permanently adversely affect private water supply catchment sources.

There is one indicated site for a borrow pit (quarries), but it is stated that other borrow pit locations may be identified, which does not allow for informed assessment, requiring further information to be provided n borrow pit location.

Water crossings have potential to permanently adversely impact catchment areas for private water supplies. There is no decisive indication of placement of these, for roads within the proposed development. I note there may be such catchment areas which potentially feed the source uptakes lying within the marked boundary area, potentially supplying feeds which then supply the private water properties lying on or just outside the marked boundary. In short, there is not enough detailed information provided.

I note that a number of the proposed turbines sites are on or very close to water tributaries, which may feed private water catchment sources.

I note that stockpiling locations have yet to be decided.

Buffer zones around potential catchments for private water supply sources must ensure there is no potential for pollution or disruption. They must be of adequate distance to ensure this. This is imperative when operations are planned on terrain such as is described in this scoping report, such as steep sided gradients, narrow deep valleys, or side wash or water displacement, contaminated water runoff downhill potential from ground bog flow, for example. Drought is now also becoming a serious issue for private water supplies across Scotland at certain times of the year.

I require proof that problems will not occur due to introduced construction or forestry operations, and wind farm operations, such as further information on which private water supplies, sources, catchment areas for those sources, and properties that have been identified by the company which have the potential to be affected by forestry operations, and construction of the entrance supply road, upgrade of the access road/s into and within the proposed windfarm. This would also be considered as part of drought conditions related to private water supplies.

I require proof that problems will not occur, or be further compounded by the proximity to further or existing windfarms such as Clauchrie, or Mark Hill.

The above list of points are not exhaustive or finite in observations.

2. Shadow Flicker

Following a complaint to the Planning Authority the applicant will appoint a suitably qualified person to the satisfaction of the Local Authority, who will undertake an investigation into the incidence of shadow flicker at the compliant location. Where shadow flicker is confirmed to result in loss of amenity, then mitigation measures require to be implemented, to the satisfaction of the Local Authority.

Reason: to prevent nuisance to residents from shadow flicker.

3. Construction Noise

a. Prior to the commencement of works on site, the company shall submit to the planning authority a management plan for minimising the emission of dust from the construction and operation of the development hereby authorised. The dust management plan shall specify the following matters and, after its approval shall be implemented in full by the Company:-

- The water spraying of all internal roads and stockpiles of materials to suppress dust in periods of prolonged dry weather;
- The means to ensure that an adequate water supply is available at all times for dust suppression purposes;

- The operation of the site so as to ensure that adequate steps are taken at all times to minimise dust propagation from un-surfaced access tracks within the site.

Reason: To minimise dust to nearby residents.

c. Prior to the commencement of the development the company shall submit to the planning authority an assessment of the effects of the development on the quantity and quality of water supplied to all properties with private water supplies that may be affected by the development. Thereafter, any mitigation measures as identified in the risk assessment shall be implemented and agreed by the planning authority in order to maintain a secure and adequate quality of water supply to all properties with private water supplies that may be affected by the development.

Reason: In order to maintain a secure and adequate water supply to all properties with private water supplies that may be affected by the development.

d. Construction works require to be carried out in accordance the approved Code of Practice BS 5228-1 and 2:2009 Noise and Vibration Control on Construction and Open Sites or any subsequent code amending consolidating or replacing it as approved by the Secretary of State pursuant to Sections 71(2) and 104 of the Control of Pollution Act 1974.

As the development is in an area of existing low ambient noise levels and the construction activities continue for more than 1 month the following minimum criteria are applicable:-

Assessment category and threshold value period (LAeq) Threshold value in decibels (dB),

Category A

Night time (23.00-07.00) 45

Evenings and Weekends* 55

Daytime (07.00-19.00) and Saturdays (07.00-13.00) 65

*19.00-2300 weekdays, 1300-23.00 Saturdays and 07.00-23.00 Sundays. 5228-1 Annex E.

e. Prior to any works being undertaken a detailed method statement for the construction project will require to be undertaken for approval by South Ayrshire Council Planning Department. This shall include an assessment of potentially noisy operations and outline the noise mitigation measures proposed. This will also include a programme and phases for each stage of work.

The site contractors shall conduct all site operations in accordance with accredited documented procedures.

This shall include a site complaint investigation procedure.

f. No Blasting shall take place until a monitoring scheme to address borrow pit blasting has been submitted to South Ayrshire Council and received the written approval of, the planning authority. The scheme shall be implemented as approved in writing by the planning authority. The scheme shall make provision for:

- Blasting monitoring locations (Nearest noise/vibration sensitive properties)
- Type of monitoring equipment to be used;
- Frequency of monitoring.
- The methods to be employed to minimise the effects of overpressure arising from blasting, having regard to blast design, methods of initiation and the weather conditions prevailing at the time;
- Limits of overpressure levels at specified properties; and
- Submission of blasting records to the planning authority.

Reason: To minimise disturbance to residents from noise and vibration.

g. No blasting shall take place except between the following times:-

- 10:00 – 12:00 and 14:00 – 16:00 Mondays to Fridays
- 10:00 – 12:00 Saturdays

Reason: To minimise disturbance to local residents.

h. Ground vibration from the blasting shall not exceed a peak particle velocity of 6mm /second at the blasting monitoring locations identified for condition 6 above. The measurement to be the maximum of three mutually perpendicular directions taken at the ground surface.

Reason: To minimise disturbance to residents in the vicinity of the wind farm.

4. Operational Noise

Operational Noise Levels:

This part of the ES is to be assessed by a 3rd party consultant and their findings suitably implemented.

Complaint Procedure

a) Within 21 days from receipt of a written request from the Local Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, the wind farm operator shall, at its expense, employ a consultant approved by the Local Planning Authority to assess the level of noise immissions from the wind farm at the complainant's property in accordance with the procedures described in the attached Guidance Notes. The written request from the Local Planning Authority shall set out at least the date, time and location that the complaint relates to and any identified atmospheric conditions, including wind

direction, and include a statement as to whether, in the opinion of the Local Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.

b) The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved in writing by the Local Planning Authority. The protocol shall include the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken, whether noise giving rise to the complaint contains or is likely to contain a tonal component, and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Local Planning Authority under paragraph (c), and such others as the independent consultant considers likely to result in a breach of the noise limits.

c) Where a dwelling to which a complaint is related has not previously had noise limits assigned against it, the wind farm operator shall submit to the Local Planning Authority for written approval proposed noise limits selected from another property which has had noise limits assigned to it to be adopted at the complainant's dwelling for compliance checking purposes. The proposed noise limits are to be those limits selected from a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant's dwelling. The rating level of noise immissions resulting from the combined effects of the wind turbines when determined in accordance with the attached Guidance Notes shall not exceed the noise limits approved in writing by the Local Planning Authority for the complainant's dwelling.

d) The wind farm operator shall provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the Guidance Notes within 2 months of the date of the written request of the Local Planning Authority for compliance measurements to be made under paragraph (c), unless the time limit is extended in writing by the Local Planning Authority. The assessment shall include all data collected for the purposes of undertaking the compliance measurements, such data to be provided in the format set on in Guidance Note 1(e) of the Guidance Notes. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note

1(a) and certificates of calibration shall be submitted to the Local Planning Authority with the independent consultant's assessment of the rating level of noise immissions.

e) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 4(c), the wind farm operator shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the Local Planning Authority.

f) The rating level of noise immissions from the combined effects of the wind turbines (including the application of any tonal penalty) when determined in accordance with the accompanying guidance notes (to this condition) shall not exceed the values for the relevant integer wind speed set out in, or derived from the table below at any dwelling which is lawfully existing or has planning permission at the date of this permission.

Guidance Notes for Noise Conditions

These notes are to be read with and form part of the noise conditions. They further explain the conditions and specify the methods to be deployed in the assessment of complaints about noise immissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level as determined from the best-fit curve described in Note 2 of these Guidance Notes and any tonal penalty applied in accordance with Note 3. Reference to ETSU-R-97 refers to the publication entitled "The Assessment and Rating of Noise from Wind Farms" (1997) published by the Energy Technology Support unit (ETSU) for the Department of Trade and Industry (DTI). Measured noise immission levels from the turbines must be referenced to standardised 10 metres height wind speeds.

Guidance Note 1

(a) Values of the LA90,10-minute noise index should be measured at the complainant's property, using a sound level meter of EN 60651/BS EN 60804 Type 1, or BS EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the fast time weighted response as specified in BS EN 60651/BS EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent UK adopted standard in force at the time of the measurements). If required, measurements shall be undertaken in such a manner to enable a tonal penalty to be applied in accordance with Guidance Note 3.

(b) The microphone should be mounted at 1.2 - 1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the Local Planning Authority, and placed outside the complainant's dwelling. Measurements should be made in "free field" conditions. To achieve this, the

microphone should be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. In the event that the consent of the complainant for access to his or her property to undertake compliance measurements is withheld, the wind farm operator shall notify the Local Planning Authority in writing that access has been denied.

(c) The LA90,10-minute measurements should be synchronised with measurements of the 10-minute arithmetic average wind speed, standardised to a height of 10 metres at the wind farm site, and with operational data logged in accordance with Guidance Note 1(d), including the power generation data from the turbine control systems of the wind farm.

(d) To enable compliance with the conditions to be evaluated, the wind farm operator shall continuously log arithmetic mean wind speed in metres per second (m/s), arithmetic mean wind direction in degrees from north in each successive 10-minute periods from the supervisory control and data acquisition (SCADA) system to enable compliance with the conditions to be evaluated. Wind speed data shall also be standardised to a 10 meters height. It is this standardised 10 metre height wind speed data which is correlated with the noise measurements determined as valid in accordance with Note 2(b), such correlation to be undertaken in the manner described in Note 2(c). In addition, the wind farm operator shall continuously log the arithmetic mean power generated during each successive 10-minutes period for each wind turbine on the wind farm. All 10-minute periods shall commence on the hour and in 10-minute increments thereafter synchronised with Greenwich Mean Time.

(e) Data provided to the Local Planning Authority in accordance with the noise condition shall be provided in comma separated values in electronic format.

Guidance Note 2

(a) The noise measurements should be made so as to provide not less than 20 valid data points as defined in Note 2 paragraph (b).

(b) Valid data points are those measured in the conditions set out in the assessment protocol approved by the Local Planning Authority under Condition 3 of the noise condition but excluding any periods of rainfall measured at the complainants dwelling.

(c) Values of the LA90,10-minute noise measurements and corresponding values of the measured 10-minute standardised 10-metre height wind speed for those data points considered valid in accordance with Note 2 paragraph (b) shall be plotted on an XY chart with noise level on the Y-axis and wind speed on the X-axis. A least squares best fit curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) should be fitted to the data points and define the wind farm noise level at each integer speed.

Guidance Note 3

- (a) Where in accordance with the approved assessment protocol under condition 3, noise imissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.
- (b) For each 10-minute interval for which LA90,10-minute data have been determined as valid in accordance with Note 2 a tonal assessment shall be performed on noise imissions during 2 minutes of each 10-minute period. The 2-minute periods should be spaced at 10-minute intervals provided that uninterrupted uncorrupted data are available (“the standard procedure”). Where uncorrupted data are not available, the first available uninterrupted clean 2-minute period out of the affected overall 10-minute period shall be selected. Any such deviations from standard procedure shall be reported.
- (c) For each of the 2-minute samples the tone level above audibility , shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104 -109 of ETSU-R-97 or future equivalent guidance for wind farm tonal noise assessment.
- (d) The tonal level above audibility shall be plotted against wind speed for each of the 2-minute samples. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be substituted.
- (e) A least squares best fit linear regression shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the “best fit” line fitted to values within $\pm 0.5\text{m/s}$ of each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Note 2.
- (f) The tonal penalty is derived from the margin above audibility of the tone according to the figure below.

Guidance Note 4

- (a) If a tonal penalty is to be applied in accordance with Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Note 2 and the penalty for tonal noise as derived in accordance with Note 3 above at each integer wind speed within the range set out in the approved assessment protocol under condition 3.
- (b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Note 2.

(c) In the event that the rating level is above the limit(s) set out in the Tables attached to the noise conditions or the noise limits for a complainant's dwelling approved by the Local Authority, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise emission only.

(d) The wind farm operator shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant or local planning authority requires undertaking the further assessment. The further assessment shall be undertaken in accordance with the following steps:

(e) Repeating the steps in Note 2, with the wind farm switched off, and determining the background noise (L3) at each integer wind speed within the range set out in the approved assessment protocol under Condition 3.

(f) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with turbines running but without the addition of any tonal penalty:

(g) The rating level shall be re-calculated by adding the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise L1 at that integer wind speed.

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note (iii) above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the limits approved by the Local Planning Authority for a complainants dwelling then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the conditions or the noise limits approved by the Local Planning Authority for a complainants dwelling then the development fails to comply with the conditions.

ACCON UK Ltd Noise Consultants

ACCON have reviewed the noise section of the scoping report. The proposed methodology is in line with what ACCON would expect from the noise consultants. ETSU-R-97 and IOA Good Practice guide are referenced in relation to operational wind turbine noise. Various aspects of the proposed assessment have been set out, such as how baseline noise data will be obtained and how the operational/construction phases will be assessed. More detail is provided below.

13.1 Introduction

The introduction describes the aspects of the project likely to generate noise. It is explained that the noise assessment will assess construction noise and operational noise on nearby sensitive receptors. The text states that an Environmental Health Officer from SAC will be consulted concerning these assessments.

13.2 Baseline

Paragraph 13.2.1 states that no information on the current baseline is available and therefore proposes that a background noise survey will be carried out. The report appropriately identifies that background noise levels are expected to be low due to the 'rural setting' and indicates some of the areas where dwellings are located. The report notes that Clauchrie wind farm, currently in planning, is immediately south east of the proposed development. The report notes that Clauchrie wind farm and the operational Mark Hill and Hadyard Hill wind farms will need to be included in the cumulative operational noise assessment.

13.3 Methodology

Study Area

This section describes the principles by which the study area will be determined for construction noise, changes in road traffic noise and operational wind turbine noise. The approaches outlined are appropriate.

Onshore Wind Turbines

The Scoping report correctly identifies ETSU-R-97 and the IOA Good Practice Guide as the key methodologies to use to assess operational noise from the proposed wind farm. ACCON note that 'Wind Turbine Development: Submission Guidance Note' (SGN) issued by South Ayrshire Council Environmental Health should also be considered when carrying out the operational noise assessment.

13.4 Assessment

This section confirms that ETSU-R-97 methodology will be adopted for the assessment of operational noise impact and correctly emphasises that the cumulative assessment will take account of wind energy developments that are operational, consented or in planning. Paragraph 13.4.6 explains that due to the large separation distances between the turbines and noise-sensitive properties, a detailed assessment of construction noise may not be required, but this will be considered as the design progresses. On this basis, no detail is provided as to how construction noise would be assessed. However, it is stated that best practice will be employed to control noise from construction in line with BS 5228.

Scoped Out Effects

The report proposes that detailed study of the following effects should be scoped out of the assessment:

- Low frequency noise and infrasound from the operation of the wind turbines
- Amplitude modulation from the operation of the wind turbines
- Ground-borne vibration from the operation of the wind turbines
- Operational noise from the Energy Storage System (which would be c. 1 km from the nearest noise sensitive receptor).
- Decommissioning

ACCON agree that these aspects can be scoped out for the reasons provided in the report.

13.5 Focussed Questions

Q1: Do South Ayrshire Council and consultees agree with the proposed methodology and scope of assessment?

Yes, but see response to Q3

Q2: Do South Ayrshire Council and Consultees have details of any further cumulative developments in the locality which they consider may raise significant issues within the EIA process for the Proposed Development?

Other proposed wind farm developments to be considered in the cumulative LVIA should be confirmed with South Ayrshire Council once an assessment cut-off date has been established. Potential significant cumulative effects are likely to arise on character and views from the Stinchar and Duisk Valleys. A key consideration in the assessment should be the visual relationship of the proposal with nearby wind farm developments which comprise smaller turbines – Mark Hill, Arecleoch, Assel Valley, Hadyard Hill. Current S36 application at Clauchrie also of considerable note should it be approved. Craiginmoddie and Carrick proposals also of note.

Q3: Do South Ayrshire Council have any specific Policies or Guidance on wind farm noise which should be taken into account in the assessment?

'Wind Turbine Development: Submission Guidance Note' (SGN) issued by South Ayrshire Council Environmental Health should also be considered in relation to the operational noise assessment.

When the applicant consults further on methodology and the approach for the background noise survey, we suggested that it will be appropriate for the consultation to be with the SAC Planning team, who can in turn refer to ACCON, as opposed to the Environmental Health Department. This would then maintain continuity for the advice on noise throughout the application process.

West of Scotland Archaeological Service

I refer to the above scoping request sent to me for consultation.

I have been sent this consultation request recently to deal with and write to advise that without access to our GIS, database and archive systems, we can't check on all of the details and questions contained in the scoping report but I can confirm that the topics cited and the proposed actions would appear appropriate and agreeable at this time.

I would add that given the extensive forestry coverage of the application area, some additional works would be required with regard to establishing the baseline data for the inner study area of the proposals. Detailed LIDAR survey of the area is currently the best way to achieve this but if not, then further walkover surveys may help to fill this gap in our knowledge.

I would also add that the application area is not at too high altitude to expect unrecorded buried remains to be present and that hill tops, knolls, ridges should be added to those areas defined in section 9.2.7. as being likely locations for past human activity.



Ayrshire Rivers Trust

working to improve Ayrshire's rivers and lochs

20 CELEBRATING 20
YEARS
2000-2020

The Scottish Government,
Energy Consents Unit,
5 Atlantic Quay,
150 Broomielaw,
Glasgow, G2 8LU

18th December 2020

Dear Sirs,

Re: Knockodhar Wind Farm Scoping Report

On behalf of the Ayrshire Rivers Trust (ART) and the River Stinchar District Salmon Fishery Board (DSFB) we would like to make the following comments on the above Scoping Report. Our comments relate only to the water environment and riparian habitat and take no account of other potential impacts. The proposed wind farm development has the potential to impact on the water environment due to its close proximity to important tributaries of the River Stinchar and the main waterbody itself. We therefore ask you consider the following comments.

Section 11.8 Focussed questions

Do consultees agree that the range of surveys carried out is appropriate and sufficient?

A wide range of surveys were completed; however, a fish population survey should have been undertaken to add strength to the fish habitat survey. Ayrshire Rivers Trust undertook surveys in 2007 for the Lambdoughty Wind Farm, these are well over 10 years old and unsure if these surveys have been considered or included.

Fish habitat surveys do not detail what fish species are present or at what density. We therefore strongly disagree that no fish surveys are required for the EIA. To fully understand the impacts the development may potentially have on the ecology of the receptor watercourses and present a contemporary reflection of the current species, a full electrofishing survey should be undertaken in order to detail the distribution and abundance of the fish populations. Only this would provide a robust baseline to inform the EIA. ART would welcome the opportunity to provide comments on proposed baseline survey methodology and survey site locations.

ART and the River Stinchar District Salmon Fishery Board would like to be consulted on issues that concern watercourses such as on water crossings and potential opportunities for ecological enhancement.

Approach to mitigation

Continuous monitoring of the fish population including surveys during and after construction to compare with the baseline, should be undertaken as part of the Construction Environmental Management Plan.

Do consultees agree with the approach to the surveys to be undertaken?

No, as stated in section 11.3.46 in the scoping report below:

“It is considered that the requirement for further detailed fish surveys to inform an assessment of effects upon fisheries including freshwater pearl mussel need not be required providing the implementation of good practice scheme design and mitigation measures in consultation with NatureScot and other primary interest groups, to avoid and/or minimise the potential for pollutant impacts upon aquatic habitats and ensure the free passage of fish within the application site is maintained. “

ART agree that further freshwater pearl mussel surveys are not required, however it is vital that a fish population monitoring programme is undertaken. These fish surveys should be undertaken before (baseline) during construction and once the development is complete. Aquatic macroinvertebrate monitoring should also be undertaken before, during and after construction to supplement water quality monitoring.

The watercourses that could be adversely impacted by this development include the Muck Water, Docherniel Burn, Drumnellie Burn and Traboyack Burn all of which are vital watercourses for spawning and juvenile nursery habitat for salmonid species as well as European Eels which are classified as 'Critically Endangered' by the IUCN Red List of Threatened Species. The River Stinchar catchment seems to be a stronghold for eels in Ayrshire with good numbers recorded at a range of sites across the catchment.

Are there any other relevant consultees/ key sources who should be contacted with respect to baseline ecological information gathering and assessment?

Yes, Ayrshire Rivers Trust along with the River Stinchar District Salmon Fishery Board.

Do consultees consider there to be any local conservation priorities that the Proposed Development should seek to explore and serve to enhance the natural heritage of the Site and local area?

ART in partnership with the RSDSFB conserve and improve the freshwater habitat upon which fisheries rely on. Headwater burns and tributaries are highly vulnerable habitats and are important spawning and nursery areas for fish. There is a need for them to be managed appropriately in order for them to function at both local and catchment level.

A priority in the River Stinchar catchment is to protect and enhance these watercourses. One approach is to plant native broadleaf trees and provide adequate buffers from livestock grazing and forestry plantation. This approach contributes to filtering and storing organic and inorganic nutrients and decreases the impact of pollution including excessive nutrients, siltation and acidification which can lead to chemical and physical degradation. Riparian tree planting can also protect rivers and fish from high water temperatures and mitigate the effects of climate change. There is the opportunity for the headwaters associated with this development to be enhanced by providing buffers and riparian tree planting.

Another priority is to provide free passage for migratory fish. Two important nursery tributaries, the Docherniel and Traboyach Burns, have access issues associated with man-made instream obstacles e.g. bridge aprons which prevent upstream fish migration. ART and the RSDSFB would welcome the opportunity for these obstacles to be addressed as part of the developments ambition to enhance the local natural heritage.

Additional Comments.

Construction and operation of the Knockodhar Wind Farm proposal has the potential to effect fish populations and fisheries within the River Stinchar catchment. We therefore request that the Environmental Impact Assessment should assess (if they have not done so already) the following potential effects from the site preparation and construction and operational activities:

1. Forest Felling and subsequent effects of this activity e.g. acidification of watercourses, rates of Surface Drainage Run-off, sediment-laden surface drainage water, input of hydrocarbons
2. Construction activities – impediment to fish movement. Construction activities should not impede movement of any migratory and resident fish populations. New water crossings (temporary or permanent) should only be installed using SEPA design and best practice guidelines. Before installation of any water crossings a fish rescue may be required to protect the immediate population within the located area. The River Stinchar DSFB, and Ayrshire Rivers Trust should be consulted beforehand to assist with the design and necessary mitigation measures. There is an opportunity for the development to have a positive impact on the water environment by upgrading old crossings within the development that may prevent or hinder fish migration.
3. Construction/operation activities - increased silt loading to watercourses. Potential impacts from soil stripping, track construction and vehicle/plant movements, dewatering on receptor watercourses and abstraction of water from watercourses.

A comprehensive mitigation and monitoring plan using the most up to date best practice guidelines should be included that will address the above potential negative impacts on watercourses.

We hope these comments are helpful. Should you require further information or clarification of any points, please don't hesitate to contact the undersigned.

Yours sincerely

Redacted

Gillian McIntyre
Biologist and Project Manager

Melrose J (Joyce)

From: laura.k.taylor@bt.com on behalf of radionetworkprotection@bt.com
Sent: 05 November 2020 17:21
To: Hughson M (Magnus); Econsents Admin
Cc: radionetworkprotection@bt.com
Subject: RE: Scoping - Knockadhar Wind Farm - WID11363

**OUR REF: WID11363**

Dear Sir/Madam

Thank you for your email dated 30/10/2020.

We have studied this Windfarm proposal with respect to EMC and related problems to BT point-to-point microwave radio links.

The conclusion is that, the Turbine locations you have indicated in 'Figure 1.2 Scoping Layout' should not cause interference to BT's current and presently planned radio network.

Please direct all queries to radionetworkprotection@bt.com

Kind regards

Laura Taylor
Engineering Services - Radio Planning

OUC: TNS187

Tel: 0331 6545329

Mobile: 07483912537

Email: laura.k.taylor@bt.com

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British Telecommunications plc

R/O : 81 Newgate Street, London EC1A 7AJ

From: Magnus.Hughson@gov.scot <Magnus.Hughson@gov.scot>

Sent: 30 October 2020 15:17

Cc: Debbie.Flaherty@gov.scot; Joyce.Melrose@gov.scot; planning.development@south-ayrshire.gov.uk;



**The Coal
Authority**

Resolving the **impacts** of mining

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG
T: 01623 637 119

E: planningconsultation@coal.gov.uk
www.gov.uk/coalauthority

For the attention of Mr Magnus Hughson
The Scottish Government Energy Consents Unit

[By email: Econsents Admin@gov.uk]

12 November 2020

Dear Mr Hughson

**ELECTRICITY ACT 1989
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND)
REGULATIONS 2017**

**ECU00002153 – Request for Scoping Opinion for Proposed Section 36 Application for
Knockadhar Wind Farm**

Thank you for your notification of 30 October 2020 seeking the views of the Coal Authority on the above.

I have checked the site location plan against our coal mining information and can confirm that the site falls outside of the defined Development High Risk Area, meaning that our records indicate there are no recorded coal mining legacy features at shallow depth.

On this basis we have no specific comments to make.

Please do not hesitate to contact me if you would like to discuss this matter further.

Yours sincerely

(Redacted)

Melanie Lindsley BA (Hons), DipEH, DipURP, MA, PGCertUD, PGCertSP, MRTPI
Development Team Leader (Planning)

[Disclaimer](#)

The above consultation response is provided by The Coal Authority as a Statutory Consultee and is based upon the latest available data on the date of the response, and electronic consultation records held by The Coal Authority since 1 April 2013. The comments made are also based upon only the information provided to The Coal Authority by the

Local Planning Authority and/or has been published on the Council's website for consultation purposes in relation to this specific planning application. The views and conclusions contained in this response may be subject to review and amendment by The Coal Authority if additional or new data/information (such as a revised Coal Mining Risk Assessment) is provided by the Local Planning Authority or the Applicant for consultation purposes.

Melrose J (Joyce)

From: The Coal Authority-Planning <TheCoalAuthority-Planning@coal.gov.uk>
Sent: 17 November 2020 08:15
To: Econsents Admin
Subject: Knockodhar Wind Farm

[For the attention of: Debbie Flaherty](#)

Dear Ms Flaherty

Thank you for your email below regarding the replacement scoping report for the above project.

As you have confirmed that all figures and other documents remain the same, the Coal Authority has no further comments to make and our previous comments, dated 12 November 2020 remain unchanged.

Kind regards and stay safe.

Deb Roberts



Deb Roberts *M.Sc. MRTPI*

Planning & Development Manager – Planning and Local Authority Liaison

T : (01623) 637 281

M: 07769 876 387

E : planningconsultation@coal.gov.uk

W: gov.uk/government/organisations/the-coal-authority

Melrose J (Joyce)

From: Redacted
Sent: 19 November 2020 11:42
To: Hughson M (Magnus); Econsents Admin
Cc: Redacted
Subject: Knockadhar Wind Farm: ECU00002153
Attachments: C&LCC-Knockadhar Scoping Request.pdf

Please find attached in PDF format Colmonell & Lendalfoot Community Council's response to your email of 30 October 2020 requesting comment in relation to the above.

Kind regards

Patrick Andrews
Secretary for and on behalf of
Colmonell & Lendalfoot Community Council

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**Lyn Craig
22 Carleton Crescent
Lendalfoot
South Ayrshire
KA26 0JN**

Magnus Hughson
The Scottish Government
Energy Consents Unit
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

Dear Sir,

**Colmonell & Lendalfoot Community Council
Request For Scoping Opinion For Proposed Section 36 Application
For Knockadhar Wind Farm (ECU00002153):**

I am writing on behalf of Colmonell & Lendalfoot Community Council in response to your email of 30 October 2020 inviting comments in relation to the above having reviewed and considered the Scoping Report prepared and submitted by Natural Power Consultants on behalf of REG Knockadhar Limited.

Colmonell & Lendalfoot Community Council have serious concerns regarding the proposed construction of Knockadhar Wind Farm that should be considered in the context of the Scoping Opinion. These include concern that:-

- The proposed construction of Knockadhar Wind Farm compounds the existing problem of the cumulative impact of wind farms in South Ayrshire that has reached saturation point with a disproportionately high number of existing wind farms compared with other areas of Scotland.
- Much of the area surrounding the site within 10 Kilometers is designated by South Ayrshire Council as "South Ayrshire Scenic Area". This recognizes the unique characteristics of the area that has a high amenity value on which our local economy depends. The proximity and scale of the proposed development risks material and detrimental impact.
- The scale of the proposed development and the height of the turbines will create an unacceptable visual impact across a wide area industrialising a unique rural landscape.
- The proposed construction will have a material and adverse impact on flora and fauna.
- The scale of the proposed Wind Farm (and in particular the height of the proposed turbines) goes beyond the change which this particular landscape is able to accommodate without significant

and detrimental effects on its character and that of the surrounding area; and

- The Scoping Report asserts that it has considered the proposal against the "South Ayrshire Landscape Wind Energy Capacity Study" commissioned by South Ayrshire Council and SNH from Carol Anderson Landscape Associates, the final report being dated August 2018 but it does not adequately demonstrate and evidence that to be the case.

Yours faithfully

Patrick Andrews
Secretary for and on behalf of
Colmonell & Lendalfoot Community Council

Melrose J (Joyce)

From: Secretary Dailly <daillycc@outlook.com>
Sent: 27 November 2020 15:44
To: Econsents Admin
Cc: Hughson M (Magnus)
Subject: REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR KNOCKADHAR WIND FARM - ECU00002153
Attachments: knockodhar scoping response 27nov2020.docx

Good afternoon

Please find attached Dailly Community Council's response to the Scoping document for Knockodhar Wind Farm.

Thank you and kind regards
Helena Menhinick
Secretary – Dailly Community Council

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DAILY COMMUNITY COUNCIL

Comments re Knockodhar Wind Farm Scoping Document

- 1 On first viewing, this appears to be a resubmission of Lambdoughty Windfarm, which did not proceed.
- 2 Cumulative impact should be based on all the wind farms that are in the pipeline at whatever state – Clauchrie, Carrick, Craiginmoddie, Arecleoch Extension and Knockodhar. As well as any that the public are not aware of. This area of South West Scotland has numerous wind farms and they all have an effect on each other which in turn affects the population, landscape, hydrology, wildlife flora and fauna, etc. – everything.
- 3 Cumulative impact should be used in measuring the effect on tourism in this whole area. This area is quite heavily reliant on tourism in all forms, including walkers, cyclists, touring caravans, B&B residents. There will of course be an effect on for example Dark Skies, Merrick Wild Lands and the Biosphere, which are tourist attractions in their own right. “The cumulative assessment will exclude other scoping stage and pre-application schemes beyond 5km in line with SNH guidance” - This SNH guidance is from 2012 before turbines were being built at over 200m height – this should not be scoped out.
- 4 Some of the studies/papers that the applicants are referring to especially relating to Hydrology and Noise are out of date. Generally the documentation relates to much smaller turbines, the turbines that are being talked about here are nearly double the height of the original ones in the area.
- 5 No part of Hydrology should be scoped out. PWS needs to be particularly well investigated - we all know there are numerous incidents of PWS issues especially relating to contamination and flow.
- 6 Noise in all aspects – Infrasound, Low Frequency and Vibration should not be scoped out. The referencing here is very out-of-date. There is more up-to-date documentation relating to the impact of Noise/Sound/Vibration in all forms on people. There are incidents in this area alone of people having to leave their homes due to noise/sound/vibration.
- 7 No part of Shadow Flicker should be scoped out. Same applies here, there are incidents of the affects of Shadow Flicker – it is not just because of flashing passed a small opening, it can happen even when you are sitting outside your own house.
- 8 There will be an increased amount of traffic especially during construction, but also during maintenance of operational turbines. These roads in this area are not built for the weight/size of vehicles. We have had experience over the years of this and the roads are never the same once destroyed.

- 9 “Do consultees agree with those surveys which have been scoped out (e.g. for great crested newt and wildcat)?” There doesn’t seem to be a complete list – does this mean that the applicants can decide what is in and what is out – for example, there is no mention of Badgers.
- 10 **We are looking at this document as lay people, we are not experts in any of these fields.**



Defence Infrastructure Organisation

Teena Oulaghan
Safeguarding Manager
Ministry of Defence
Safeguarding Department
Kingston Road
Sutton Coldfield
West Midlands
B75 7RL

Magnus Hughson.
Energy Consents Unit,
Scottish Government,
4th Floor,
5 Atlantic Quay,
150 Broomielaw,
Glasgow,
G2 8LU.

MOD Telephone: 07970170934
E-mail: teena.oulaghan100@mod.gov.uk

Application Ref: ECU00002153
Our Reference: DIO10049484

17 November 2020

Dear Magnus,

Site Name **Knockodhar Wind Farm**

Site Address **3.5km south west of the village of Barr.**

Proposal **ELECTRICITY ACT 1989 THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR KNOCKADHAR WIND FARM - 32 WIND TURBINES 200M TO BLADE TIP AND 2 X TEMPORARY MET MASTS.**

Thank you for consulting the Ministry of Defence (MOD) on the above request for a Scoping Opinion for the proposed construction and operation of a wind farm which was received by our office on 30th October 2020.

I am writing to inform you that the MOD has concerns about this proposed development. We have assessed this proposal on the basis that there will be 32 turbines at 200.00 metres in height from ground level to blade tip, 2 Meteorological Masts and located at the grid references detailed in the table below:

Turbine	Easting	Northing
1	226,782	590,189
2	227,092	589,814
3	226,417	590,509
4	226,007	590,794
5	226,587	589,409
6	225,897	590,103
7	226,257	589,786
8	225,428	590,549
9	226,090	588,983
10	225,772	589,347
11	225,416	589,671
12	225,080	590,024
13	225,251	588,963

14	225,578	588,579
15	224,898	589,289
16	224,553	589,638
17	224,916	588,431
18	224,559	588,764
19	224,215	589,110
20	223,958	589,528
21	224,252	588,223
22	223,925	588,565
23	223,651	588,953
24	223,327	589,308
25	223,049	588,769
26	222,144	588,681
27	222,902	588,209
28	221,798	588,161
29	222,369	588,246
30	222,663	589,067
31	224,833	590,436
32	224,305	590,077
Temp Met Mast	223,338	589,034
Temp Met Mast	224,977	590,000

It has been identified that this development will have the following impacts upon defence operations:

Military Low Flying Training

The proposed will occupy Tactical Training Area 20T (TTA 20T) in which military fixed wing aircraft can engage in operational low flying training down to 45.7m above terrain features. Therefore, in the interests of air safety, the MOD would request that the development be fitted with MOD accredited aviation safety lighting in accordance with the Civil Aviation Authority, Air Navigation Order 2016.

MOD Safeguarding wishes to be consulted and notified about the progression of this proposal and any subsequent application(s) that may be submitted relating to it to verify that it will not adversely affect defence interests.

I trust this adequately explains our position on this matter. Further information about the effects of wind turbines on MOD interests can be obtained from the following website:

<https://www.gov.uk/government/publications/wind-farms-ministry-of-defence-safeguarding>

Yours sincerely

(Redacted)

Teena Oulaghan
Safeguarding Manager

Melrose J (Joyce)

From: Steve Thomson <sthomson@glasgowprestwick.com>
Sent: 13 November 2020 09:25
To: Hughson M (Magnus); Econsents Admin; Econsents Admin
Cc: Windfarm; Safeguarding
Subject: Knockadhar Wind Farm - Scoping Consultation Response from Glasgow Prestwick Airport Ltd - 13th Nov 2020

Magnus,

1. On behalf of Glasgow Prestwick Airport (GPA) Ltd – I have reviewed the Scoping Report (and associated documents) available on the Energy Consents Unit portal for Knockadhar Wind Farm.
2. The proposed scope of the Environmental Impact Assessment (EIA) seems appropriate – and we are pleased that the Developer intends to engage with GPA in respect of aviation safety around radar display clutter likely from turbines visible to the GPA primary radars.
3. Preliminary Line of Sight (LOS) analysis at proposed 200m tip height of Knockadhar Windfarm – indicates at least 6 turbines will be visible to GPA’s primary radars, with a number of others marginally terrain shielded - and it is likely that further detailed radar modelling assessments/flight trials would be necessary to confirm the exact number of turbines visible to GPA radar – and whether their impact can be mitigated for the lifetime of the windfarm. We would be happy to discuss this further with the Developer as and when they formally engage with GPA on this proposed development.
4. Furthermore GPA may also require an assessment to be undertaken by the Developer of the proposed windfarm against our published Instrument Flight Procedures (IFP’s) (both conventional and RNAV/RNP) – to satisfy ourselves that the turbine tip heights have no impact on our existing published IFP’s.
5. GPA request to be consulted should this proposed development reach formal planning application stage.

With Kind Regards

Steve Thomson

HISTORIC
ENVIRONMENT
SCOTLANDÀRAINNEACHD
EACHDRAIDHEIL
ALBA

By email to: econsents_admin@gov.scot

Energy Consents Unit
4th Floor, 5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

Enquiry Line: 0131-668-8716
HMConsultations@hes.scot

Our case ID: 300047245
Your ref: ECU00002153
19 November 2020

Dear Energy Consents Unit

**The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Knockodhar Wind Farm, South Ayrshire
EIA Scoping Report**

Thank you for your consultation which we received on 30 October 2020 about the above scoping report. We have reviewed the details in terms of our historic environment interests. This covers world heritage sites, scheduled monuments and their settings, category A-listed buildings and their settings, inventory gardens and designed landscapes, inventory battlefields and historic marine protected areas (HMPAs).

WOSAS will also be able to offer advice on the scope of the cultural heritage assessment. This may include heritage assets not covered by our interests, such as unscheduled archaeology, and category B- and C-listed buildings.

Proposed Development

We understand that the proposed development comprises of up to 32 turbines with a maximum tip height of 200 metres at land at Knockodhar, South Ayrshire, 3.5 kilometres south west of the village of Barr.

Scope of assessment

While we can confirm that no heritage assets within our remit are located within the development site boundary, we consider that the proposals may give rise to impacts on the setting of a number of heritage assets located within its vicinity.

Any Environmental Impact Assessment (EIA) undertaken for the proposals should therefore include an assessment of impacts on heritage assets and their settings.

EIA Scoping Report (October 2020)

We have reviewed the EIA Scoping Report (October 2020) submitted as part of this scoping request.



We note that the report doesn't contain a full methodology. It's important for us to understand your methodology in detail and we would be happy to review it before EIA Report stage. We would recommend consulting our [EIA Handbook](#) for more information.

No specific assets have been identified for us to review. We would be happy to engage further with the applicant and confirm whether we were content with a proposed list of assets for detailed assessment. This should be informed by a robust appraisal and the results and rationale behind the selection of assets for detailed assessment clearly set out for us to review. We would also be able to provide further advice on what visualisations may be required from the selected assets.

The Scoping Report identifies an inner study area of 2km and an outer study area of 20km. The report proposes that for exceptionally important assets, where long distance views are thought to be particularly sensitive, out to 20km would be included for assessment. We are unsure what criteria for 'exceptional' importance would be applied. Therefore, we would advise that all nationally important assets, up to at least 10km from the proposed development should be appraised for potential impacts on their settings.

It is acceptable that assets which have no potential for adverse impacts on their setting are excluded from detailed assessment. However, the rationale for this exclusion should be clearly set out in the assessment report. This would allow stakeholders to reach a view as to whether an asset's exclusion was reasonable or not.

Where potential for adverse impacts on an asset's setting are identified then it should be taken forward for detailed assessment to identify the scale of impacts. This is likely to require a site visit and, in some cases, production of visualisations.

Due to the proximity of other wind farm developments, the consideration of cumulative impacts will also be important.

Subject to any detailed consideration when more information is available, we can confirm that, in principle, there may be scope for a wind farm development in this location without adverse effects on assets such that we might object. However, this would require robust assessment and, if appropriate, mitigation by design of the proposed development.

Further information

Guidance about national policy can be found in our 'Managing Change in the Historic Environment' series available online at www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes. Technical advice is available on our Technical Conservation website at <http://conservation.historic-scotland.gov.uk/>.



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ALBA

We hope this is helpful. Please contact us if you have any questions about this response. The officer managing this case is Chloe Porter and they can be contacted by phone on 0131 668 8653 or by email on chloe.porter@hes.scot.

Yours faithfully

Historic Environment Scotland

Historic Environment Scotland – Longmore House, Salisbury Place, Edinburgh, EH9 1SH

Scottish Charity No. **SC045925**

VAT No. **GB 221 8680 15**

Melrose J (Joyce)

From: JRC Windfarm Coordinations <windfarms@jrc.co.uk>
Sent: 05 November 2020 16:21
To: Econsents Admin
Subject: FW: Scoping - Knockodhar Wind Farm [WF655604]

Dear econsents_admin,

A Windfarms Team member has replied to your co-ordination request, reference **WF655604** with the following response:

Dear Debbie,

Thanks for the additional information/scoping report. Please see JRC up to date response:

Planning Ref:

ECU00002153

Name/Location:

Knockadhar Wind Farm

Site Centre/Turbine at NGR:

- T1 - 226782 590189
- T2 - 227092 589814
- T3 - 226417 590509
- T4 - 226007 590794
- T5 - 226587 589409
- T6 - 225897 590103
- T7 - 226257 589786
- T8 - 225428 590549
- T9 - 226090 588983
- T10 - 225772 589347
- T11 - 225416 589671
- T12 - 225080 590024
- T13 - 225251 588963
- T14 - 225578 588579
- T15 - 224898 589289
- T16 - 224553 589638
- T17 - 224916 588431
- T18 - 224559 588764
- T19 - 224215 589110
- T20 - 223958 589528
- T21 - 224252 588223
- T22 - 223925 588565
- T23 - 223651 588953
- T24 - 223327 589308
- T25 - 223049 588769
- T26 - 222144 588681
- T27 - 222902 588209

T28 - 221798 588161
T29 - 222369 588246
T30 - 222663 589067
T31 - 224833 590436
T32 - 224305 590077

Development Radius: 0.1km

Hub Height: 90m **Rotor Radius:** 50m (These sizes are used if not specified)

This proposal **cleared** with respect to radio link infrastructure operated by:

Scottish Power and Scotia Gas Networks

JRC analyses proposals for wind farms on behalf of the UK Fuel & Power Industry. This is to assess their potential to interfere with radio systems operated by utility companies in support of their regulatory operational requirements.

In the case of this proposed wind energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. However, if any details of the wind farm change, particularly the disposition or scale of any turbine(s), it will be necessary to re-evaluate the proposal.

In making this judgement, JRC has used its best endeavours with the available data, although we recognise that there may be effects which are as yet unknown or inadequately predicted. JRC cannot therefore be held liable if subsequently problems arise that we have not predicted.

It should be noted that this clearance pertains only to the date of its issue. As the use of the spectrum is dynamic, the use of the band is changing on an ongoing basis and consequently, developers are advised to seek re-coordination prior to considering any design changes.

Regards

Wind Farm Team

Friars House
Manor House Drive
Coventry CV1 2TE
United Kingdom

Office: 02476 932 185

JRC Ltd. is a Joint Venture between the Energy Networks Association (on behalf of the UK Energy Industries) and National Grid.

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By email to: Econsents_Admin@gov.scot

FAO Magnus Hughson
 Energy Consents Unit
 Directorate for Energy and Climate Change
 5 Atlantic Quay
 150 Broomielaw
 Glasgow
 G2 8LU

3 November 2020

Dear Sir/Madam

Knockodhar Wind Farm: Environmental Impact Assessment Scoping Report

ECU reference: ECU00002153

Background and Context

A partnership of RPM, a Gloucester-based wind farm developer, and ESB, an Irish state-owned energy company, are scoping an Environmental Impact Assessment for a wind farm in South Ayrshire, southeast of Girvan. The scoping is considering 32 turbines of up to 200m blade-tip height.

Mountaineering Scotland is a membership organisation with almost 15,000 members and is the only recognised representative organisation for hill walkers, climbers, mountaineers and ski-tourers who live in Scotland or who enjoy Scotland's mountains, and acts to represent, support and promote Scottish mountaineering. Mountaineering Scotland also acts on behalf of the 85,000 members of the British Mountaineering Council (BMC) on matters related to landscape and access in Scotland, and provides training and information to mountain users to promote safety, self-reliance and the enjoyment of our mountain environment.

Assessment

Mountaineering Scotland is in general content with the proposed methodology in the Scoping Report.

We support assessment from the proposed hill viewpoints:

VP 9 Knockdolian (c.12km from the proposed development)

VP 10 Shalloch-on-Minnoch (c.13km)

VP 11 The Merrick (c.17km)

VP 12 Lamachan Hill (c.21km)

VP 14 Cairnsmore of Fleet (c.32km)



Melrose J (Joyce)

From: NATS Safeguarding <NATSSafeguarding@nats.co.uk>
Sent: 17 November 2020 13:22
To: Econsents Admin
Subject: RE: Scoping - Knockodhar Wind Farm [SG30592]

Our Ref: SG30592

Dear Sir/Madam

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours faithfully



NATS Safeguarding

E: natssafeguarding@nats.co.uk

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk





Magnus Hughson
Case Officer
Energy Consents Unit
The Scottish Government
Econsents_Admin@gov.scot

27 November 2020

Our ref: CEA161055

Dear Magnus,

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR KNOCKODHAR WIND FARM (YOUR REF: ECU00002153)-

Thank you for your consultation dated 30 October 2020 on the scope of the Environmental Impact Assessment (EIA) for the proposed Knockodhar Wind Farm, South Ayrshire.

1. Background

- 1.1 The proposed development is for a wind farm of 32 turbines with a maximum tip height of 200 metres, and ancillary infrastructure, located in the planning authority area of South Ayrshire Council, approximately 2.5km from Pinwherry, and approximately 3.5km from Barr.
- 1.2 We have previously provided the applicant's consultants with advice on the landscape, ornithology, and ecological aspects of the project in a letter dated 01 March 2019 and email dated 03 March 2019 and further advice relating to bat survey methodology and assessment in an email of 17 June 2020.

2. General scoping advice

- 2.1 We refer the applicant to our general pre-application/scoping advice for developers of onshore wind farms¹. This provides guidance on the issues that developers and their consultants should consider for wind energy developments and includes information on

¹ <https://www.nature.scot/professional-advice/planning-and-development/renewable-energy-development/types-renewable-technologies/onshore-wind-energy/general-advice-wind-farm>

recommended survey methods, sources of further information and guidance, and data presentation. Attention should be given to the full range of advice included in the guidance. The checklist in Annex 1 of our guidance sets out our expectations of what should be included in the ES, while Annex 2 provides guidance on undertaking lighting assessments.

- 2.2 The guidance document will be updated over time to reflect any changes to available information and our guidance, so users should ensure they download the most up to date version before use.
- 2.3 The applicant should also refer to our [general guidance on onshore wind farm development](#) and ensure relevant guidance is fully considered when undertaking the EIA Report. All of our current standing advice for planners and developers is also listed [here](#).

3. Key natural heritage interests

Landscape and Visual Amenity

Merrick Wild Land Area (WLA 01) – Merrick

- 3.1 The western boundary of the Merrick Wild Land Area is approximately 12km to the east of the proposed application site. The Merrick WLA is Scotland’s most southerly wild land area and is of national importance. ***At this distance, the 200m Knockodhar turbines would be prominent human elements in day-time views from the Merrick WLA WLA, resulting in potentially significant adverse landscape and visual effects and a weakening of the attributes of the WLA. This would be exacerbated after sunset and into darkness as the wild land qualities increase in intensity and the turbine lights become new focal points. This would further weaken and erode the wild land attributes and responses and significantly detract from the wild land experience sought by those who intentionally stay on the hills after dark to experience the sunset and dark skies within the WLA.***
- 3.2 Given the proximity of the proposals to the Merrick WLA and the potential high sensitivity of the WLA to the inclusion of large (lit) turbines into this landscape, we welcome the applicant’s proposal to undertake a Wildland Assessment that is in accordance with our current technical guidance Assessing Impacts on Wild Land Areas, September 2020 (<https://www.nature.scot/assessing-impacts-wild-land-areas-technical-guidance>).
- 3.3 The proposed Knockodhar Wind Farm would introduce a large number of very tall turbines (up to 32 turbines approximately 200m to blade tip) into the South Ayrshire landscape in an area classified as a *Plateau Moorland with Forest and Wind Farms* Landscape Character Type (LCT). Located just adjacent to the Dark Sky Park Buffer Area and with turbines located between roughly 16km and 20km from the high tops of the Merrick Wild Land Area, this is a sensitive site for this scale of development, as corroborated in the recently updated *South Ayrshire Landscape Wind Capacity Study (SALWCS), August 2018*.
- 3.4 We highlight the sensitivity of the adjacent Duisk and Stinchar Valleys and refer the applicant to the SALWCS for recent commentary on the sensitivity of the *Intimate Pastoral Valleys LCT (13)*. This study states that the *Plateau Moorland with Forestry and Wind*

Farms LCT (18c) has some very limited scope to accommodate very large turbines (greater than 130m). However it also highlights that there are likely to be effects on adjacent sensitive valleys and on the Carrick Forest area, as well as cumulative effects with existing wind farms, and potential effects of fixed lighting required on turbines greater than 150m high on the Dark Skies Park.

- 3.5 We therefore advise that there would be significant adverse cumulative landscape and visual impacts arising from the proposed scheme in combination with adjacent existing, consented and proposed developments. Night time aviation lighting requirements are a key consideration for this proposal as in our experience turbine lights can be seen over considerable distances, with some clearly visible at 20-30km. In particular we advise that consent of this proposal in addition to Clauchrie wind farm (currently at Appeal) is likely to result in significant adverse cumulative impacts on the Merrick Wild Land Area. **We may object to Knockodhar wind farm should an application be submitted for the proposal in its current form.** Our comments at this stage are however given without prejudice to a full and detailed consideration of the impacts of the proposal if it is submitted as a formal application.

Carbon-rich soils, deep peat and priority peatland habitat

- 3.6 There are areas of class 1 peat within or adjacent to the application site, as shown on the **Carbon & Peatland Map 2016**. Class 1 areas are nationally important carbon-rich soils, deep peat and priority peatland habitat and are likely to be of high conservation value.
- 3.7 While Scottish Planning Policy identifies such areas as ‘areas of significant protection’, the location of a proposal in the mapped area does not, in itself, mean that the proposal is unacceptable, or that carbon rich soils, deep peat and priority peatland habitat will be adversely affected. However, the assessment of impacts of the proposal must demonstrate that any significant effects on the qualities of the area can be substantially overcome by siting, design or other mitigation. We recommend early engagement with SEPA with regard to the reuse and disposal of excavated peat.
- 3.8 We note, and welcome, that a peat probing survey has been carried out on the site. To inform the assessment of impacts and identification of appropriate mitigation, we advise that peat surveys of the site, measuring the peat deposit to full depth, should be undertaken in accordance with the Scottish Government’s Peatland Survey 2017: Guidance on Developments on Peatland. The results should also be used to inform a peat slide assessment. We recommend early engagement with SEPA with regard to excavated peat reuse and disposal.
- 3.9 The final siting and design of the proposed development and how this may affect peatland must be fully described and assessed in the EIA Report. How significant effects will be mitigated must also be fully described. We would also find it helpful for to mapping which shows the location of all access roads, infrastructure, borrow pits and turbine pads overlain onto separate NVC and peat maps to be included in the EIA Report.

Protected areas within 20km

- 3.10 Our advice is that the proposed scheme raises natural heritage issues of National Importance that will require careful assessment as part of the EIA process, some of which could lead to an objection from us if it is not possible to demonstrate that any significant impacts can be adequately addressed through siting, design or other mitigation.
- 3.11 Details of the protected areas referred to below, including their conservation objectives / site management statements, can be found in the **Sitelink** section of our website. The developer should assess the direct and indirect impacts of the proposed development on protected areas and their qualifying interests / notified features in the context of their conservation objectives / site management statements. The assessment should be for the proposal on its own and in combination with other plans or projects also affecting the protected areas.

European sites

- 3.12 The proposal could affect the Ailsa Craig Special Protection Area (SPA), protected for its migratory gannet and lesser black-backed gull and its seabird assemblage.
- 3.13 The site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") or, for reserved matters, The Conservation of Habitats and Species Regulations 2017 apply. Consequently, Scottish Ministers will be required to consider the effect of the proposal on the SPA before it can be consented (commonly known as Habitats Regulations Appraisal). Advice on this process is available on our website at <https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra>.
- 3.14 The scoping report notes that both lesser black-backed gull and herring gull (a component of the SPA's seabird assemblage) have been recorded during flight activity surveys. Our advice is that this proposal is therefore likely to have a significant effect on name of qualifying interests of site. Consequently, Scottish Ministers, as competent authority, will be required to carry out an appropriate assessment in view of the site's conservation objectives for its qualifying interests. To help you do this, we propose to carry out an appraisal to inform your appropriate assessment. To enable us to carry out this appraisal, the following information is required as part of the EIA Report:

- An assessment of potential collision risk for lesser black-backed and herring gulls and how this may affect the viability of the relevant species' SPA population.

A recent BTO research report provides up to date information relevant to this assessment (See Desk-based revision of seabird foraging ranges used for HRA screening, Woodward et al 2019).

- 3.15 The Scoping Report notes that the development lies 2.2km to the west of the Lendalfoot Hills Complex Special Area of Conservation (SAC) at its nearest point. Our advice is that it is unlikely that the proposal will have a significant effect on any qualifying interests of the

SAC either directly or indirectly due to the geographic distance and lack of hydrological connectivity between the two sites. An Appropriate assessment is therefore not required.

Nationally protected sites

- 3.16 The Aldons Hill, Feoch Meadows, Pinbain Burn to Cairn Hill, Knockdaw Hill, Littleton and Balhamie Hills and Craig Wood Sites of Special Scientific Interest (SSSI) all lie within 5- 10km from the closest part of the application site. While there are natural heritage interests of national importance on these sites, these are unlikely to be affected by the proposal given the geographic separation distance and that these SSSIs are not directly hydrologically connected to the development site. Therefore the objectives of designation and the overall integrity of the areas will not be compromised.

Habitat management

- 3.17 We welcome the Applicant's intention to develop a Habitat Management Plan (HMP) for the development and recommend a draft of this is submitted with the EIA Report. The Habitat Management Plan should make provision for mitigation of, or compensation for, significant impacts of the development and measures to enhance the natural heritage interest of the area. The relationships between this plan and the proposed Windfarm Forest Design Plan should be made clear so that a unified, holistic approach to the management of habitats and land present on the site are presented for comment.
- 3.18 Development of the HMP should follow our guidance on *Planning for development: What to consider and include in Habitat Management Plans*² and the plan should tie in with any relevant bog (and other) habitat restoration proposals for adjacent sites in the area.

Species Considerations

General

- 4.1 Surveys for protected species should be completed no more than 18 months prior to submission of the application, to ensure that the survey results are a contemporary reflection of species activity at and around the site. Where the ongoing assessment process finds that particular species could be affected by the proposal, then a species specific protection plan should be prepared. If the implementation of the identified mitigation measures within any such plan is not sufficient to avoid an offence under protected species legislation, a licence will be required from NatureScot before the works can proceed. It is important that any licensing issues are fully established as part of the planning application. This is to avoid a situation where planning permission is secured but the lack of a species licence prevents the development from proceeding. Our standing guidance on species survey requirements and associated licensing considerations can be found on our website at <https://www.nature.scot/professional-advice/planning-and->

² <https://www.nature.scot/guidance-planning-development-what-consider-and-include-habitat-management-plans>

development/planning-and-development-advice/planning-and-development-protected-species.

Red squirrel

- 4.2 We note that no red squirrels were found in the preliminary surveys but given the proximity to known red squirrel sites and the Nith Priority Area for red Squirrel Conservation <https://scottishsquirrels.org.uk/wp-content/uploads/2020/07/SSRS-Priority-Areas-for-Red-Squirrel-Conservation-in-South-Scotland.pdf> we recommend additional survey effort according to our standing guidance. If this survey work finds that red squirrel could be affected by the proposal a red squirrel protection plan should be prepared. If the implementation of the identified mitigation measures within this plan is not sufficient to avoid offences under protected species legislation, a licence will be required from NatureScot before the works can proceed.

Deer

- 4.3 We recommend that if deer are present on or will use the development site, an assessment of the potential impacts on deer welfare, habitats, neighbouring and other interests (e.g. access and recreation, road safety, etc.) should be presented. If the development would, or could, result in significant impacts, a draft deer management statement should be provided, setting out how the impacts will be addressed. There's advice on this in our guidance "*What to consider and include in deer assessments and management at development sites*" (<https://www.nature.scot/guidance-planning-and-development-what-consider-and-include-deer-assessment-and-management>).

Nesting birds

- 4.4 Ground or vegetation clearance works should be undertaken out-with the main bird nesting season (March-August inclusive). If this is not possible, a Breeding Bird Protection plan should be prepared. This should make provision for a suitably experienced ecologist to check the development site before work commences to determine the presence of any nesting birds and to implement suitably sized buffer zones around active nests where no work will take place until the young have fledged or the nest is no longer in use. This will ensure that no nests are destroyed during the site construction works and no offences are committed under the Wildlife and Countryside Act 1981 (as amended).

5. Responses to specific questions detailed in the Scoping Report

- 5.1 Where not covered above, our responses to the specific questions included in the Scoping Report are given in Annex 1.

Concluding remarks

I hope that this response will assist you in your consideration of this scoping request. However, please contact me should you wish to discuss our advice. Please note that while we are supportive

of the principle of renewable energy, our advice is given without prejudice to a full and detailed consideration of the impacts of the proposal if it is submitted as a formal application.

Finally, this advice is provided by NatureScot, the operating name of Scottish Natural Heritage.

Yours sincerely

Ian Cornforth

Operations Officer, Ayrshire & Arran

ian.Cornforth@nature.scot

cc Ruth Highgate, Savills **ruth.highgate@savills.com**

Melvyn McKeown, REG Power Management Limited **melvynmckeown@regpower.co.uk**

Annex 1- NatureScot responses to Scoping Report's focused questions

Landscape and Visual Impact Assessment

8.1 Consultees are requested to confirm their agreement with the proposed methodology for the LVIA as set out in Appendix 8A and the scope of this assessment as set out in Tables 8.4-5.

We have not read the LVIA Appendix 8.4 in detail but it appears that sections 1.1 – 1.9 cover the main issues for LVIA and CLVIA. The onus is on the Applicant's landscape architect to ensure that the LVIA is carried out in accordance with recognised methodologies including GLVIA#3.

In Table 8.4 it is not clear whether all effects are considered for all receptors in each section. We advise that impacts of aviation lighting should be considered for the Merrick Wild Land Area and other sensitive receptors such as relevant local and regional Scenic Areas, and *Intimate Pastoral Valley* LCTs as well as The Dark Sky Park. We also advise that the cumulative effects of night time lighting is scoped into the assessment for the same range of receptors (Table 8.5).

8.2 Consultees are requested to advise on other relevant planning or technical guidance relevant to this assessment including details concerning other wind farm development likely to be most relevant to the cumulative assessment. In particular access to the South Ayrshire Local Landscape Area Review 2018, and any further guidance on Night-time Assessment is requested where possible.

- We advise that the applicant consults South Ayrshire Council and Dumfries & Galloway Council for an up-to-date list of relevant wind farms to include in the assessment.
- We have some additional advice for the proposed night time assessment (section 1.10).

We welcome the proposal to include a Night Time Assessment which is particularly relevant for turbines of this height in this location. The requirement for aviation lighting of turbines is a fairly recent issue for the wind energy sector and we have relatively limited experience of assessing the effects and understanding the impacts. Nonetheless, the effects of aviation lighting could be significant in some locations and should be assessed through the EIA process. Wind farms tend to be located in areas which contain limited artificial lighting. Darkness/dark skies in these areas may be valued by many people, a proportion of whom may be actively seeking out and enjoying good views of the night sky (such as the Galloway Forest Dark Sky Park and its buffer area). In our experience turbine lights can be seen over considerable distances, with some clearly visible at 20-30km. A flashing effect can also occur, depending on wind direction, as turbine blades pass in front of the nacelle-mounted lighting. Turbine lighting could therefore adversely affect people's experience and enjoyment of darkness/ dark skies and of sunset and sunrise views (noting that turbine lights are switched on before dusk and off after dawn). As a result, we recommend that these effects should be carefully assessed and that mitigation is employed wherever possible. Assessment of the landscape and visual effects of turbine lighting is a relatively new practice. The extent of the lighting assessment study area for LVIA should be informed by the Zone of Theoretical Visibility (ZTV) map and an understanding of the nature of the likely effects. As a

starting point we highlight advice in our existing landscape guidance, however our advice is evolving and we currently advise that the LVIA-related lighting assessment should include:

- Clear information on the positions and intensity of lighting proposed and, if only certain turbines are to be lit (e.g. due to a mix of turbine heights), a plan showing which turbines (numbered turbines) would be lit.
- Production of a ZTV map which shows the areas from which the nacelle and tower lights may be seen.
- Annotation of the positions of turbine lighting (including intermediate tower lights) on all wirelines from every viewpoint.
- Assessment of effects on landscape character, in particular where qualities of wildness, remoteness and lack of man-made elements is a feature of that landscape.
- A table which lists how many lit turbines will be visible from each viewpoint (see table below)

Turbine number (and height)	Viewpoints						
	VP1 Hillyside (2.6km)	VP2 Lochview (12.3km)	VP3 Glenburn (6.7km)	etc	etc.	etc	etc
T1 (150m)	Xx			Xx	Xx	Xx	Xx
T2 (175m)	Xx			X	Xx	Xx	Xx
T3(150m)	Xx		X	Xx	X	Xx	Xx
etc	Xx		X	Xx	Xx	X	X
Key							
Xx	Lights visible as pair on nacelle and tower						
X	Light visible as single light on nacelle						
	Lights currently screened by forestry						

- Written assessment based on fieldwork for all viewpoints (i.e. with potential visibility of lighting, and where effects may be significant). In a worst case scenario this may involve all viewpoints, but professional judgement should be applied to ensure the assessment remains focused on likely significant effects (in accordance with GLVIA#3).
- The assessment should take into account the baseline darkness/ artificial lighting characteristics and people's likely use of different areas during darkness and low light (dusk/ dawn) conditions. In some cases, there may be the need to select some of the LVIA assessment viewpoints on the basis of the turbine lighting impacts, as opposed to day-time visual effects. Edge of settlement locations are likely to be better lighting assessment viewpoints, compared with locations within towns/ villages (i.e. given the influence of existing street lighting, etc.). As for any component of the wind turbine, they should assess for all, where lighting will not be visible then they can just add a simple statement in the assessment table.
- Night-time visualisations from a limited but proportionate number (we suggest two or three) of representative viewpoints. These may be selected on the basis of sensitivity or regular usage during low-light conditions.
- We advise that lighting is shown at both 200cd and 2000cd on separate visuals. Our experience shows that the visibility of aviation lights and their perceived strength depends on the night time lighting context. There is also some doubt as to how well the dimming of the lights works in the real world where conditions cover a huge range of variability. Production of visuals at 200cd and 2000cd will help to clarify the lighting scenarios and ensure that aviation lighting effects are not underplayed.

We encourage applicants to explore all available forms of lighting mitigation as a means of reducing or avoiding impacts. A number of mitigation options exist and these should be considered on a case by case basis. Mitigation options are evolving rapidly. Current options include:

Mitigation option	How it works
Directional intensity / shielding of lights	<p>Already set out in ICAO requirements and EASA CS-ADR-DSN Chapter Q. This focusses the 2000 cd lighting in the horizontal plane (+ or – a few degrees) and reduces the intensity of the light from above and below.</p> <p>Both regulations stipulate minimum requirements as well as additional recommended vertical angles, which cannot be ignored without justification. Most lights on the market will incorporate this as standard.</p>
Reduce intensity of lights from 2000 to 200 cd	<p>Already set out in CAA guidance CAP 764. Lights can be dimmed to 200 cd in good visibility (greater than 5km). SNH note that 200 cd lights can still be visible at greater than 20km in good visibility conditions.</p>
Selected turbine lighting or no turbine lighting	<p>It may be acceptable to only light certain turbines (as agreed at Viking for example), or none of the turbines, on the basis of an aeronautical study (as provided for in ICAO Annex 14), subject to CAA approval on a case by case basis.</p>
Radar activated lighting	<p>CAA support this in principle and are considering the parameters in detail. In the meantime CAA are happy to discuss the approach on a case by case basis. In use in other countries, to differing extents, but it is acknowledged that the costs are high.</p>
Micro siting and turbine height	<p>The need for lights can also be avoided through careful wind farm design and the use of smaller turbines (less than 150m)</p>

As noted above, the night time assessment for Knockodhar should include a cumulative night time lighting assessment. Relevant schemes would include Clachrie, Carrick, Arecleoch Extension and any other scheme that will require night time lighting. We advise that Craiginmoddie wind farm (scoping June 2020) is also included.

8.3 Consultees are requested to comment and advise on the extent of the LVIA Study Area and the proposed day-time and night-time viewpoints listed in Table 8.3.

A 45km study area is acceptable for this LVIA. We note the intention to iterate the study area as the LVIA progresses and advise that particularly sensitive receptors just outwith the study area should be included, at least initially.

The scoping report provides a reasonable spread of viewpoints. However the final list of viewpoints is the responsibility of the applicant's landscape consultant and each should be micro-sited to show the worst case scenario.

We suggest that a further viewpoint location should be investigated (at least wirelines) on Arran from where the turbines might be seen in the foreground of views to the high tops of the Merrick WLA. We reserve the option to request additional viewpoints if we consider it necessary. We would welcome clear numbering of all turbines on at least one visualisation for each viewpoint.

In addition to the three night time viewpoints listed in Table 8.3 (viewpoints 1, 4 and 8) we advise that Benyellary - just south of the Merrick - is selected as an additional night time viewpoint to represent the Merrick Wild Land Area and the Galloway Dark Sky Park. This viewpoint was helpfully used in the recent Clachrie application. We further advise that this viewpoint should also be used for the cumulative night time lighting assessment.

8.4 Consultees are requested to confirm their agreement with the scope of this assessment as set out in Tables 8.4-5 and the LVIA limitations / matters to be scoped out in section 8.4.21

Please see comments above.

Ornithology

10.1 Do consultees agree that the range of surveys carried out is sufficient and appropriate?

Most of the wind farm is within forestry that is likely to be of relatively low conservation value, so while there may be some possible effects around the open habitats that surround the wind farm, overall we would not expect there to be any particularly significant issues.

10.2 Are there any other relevant consultees/key sources who should be contacted with respect to baseline ornithological information gathering?

The South of Scotland Black Grouse Group should also be approached. Whilst we appreciate the absence of black grouse on surveys, it would be helpful to obtain the view of the Group, for historical information and any possible, longer term management measures that may be needed.

10.3 Do consultees agree with the proposed assessment of the potential effects as a result of the Proposed Development, including the approach to cumulative assessment?

We agree with the approach taken but would add that the applicant should appraise themselves of our **wider countryside guidance**. We welcome the Applicant's use of our cumulative guidance, which is appropriate.

10.4 Are there any specific non- wind energy developments that consultees believe should be considered for inclusion within the cumulative impact assessment?

We are not currently aware of any relevant developments.

10.5 Do consultees agree that effects upon statutory designated sites, black grouse and nightjar can be scoped out from the EIA?

Statutory designated sites: As advised in our letter, Knockadhar is within connectivity distance of Ailsa Craig SPA. Site surveys show the presence of both herring and lesser black-backed gulls which are qualifying features of the SPA therefore Ailsa Craig SPA must be scoped in because there is a Likely Significant Effect on the SPA.

Black grouse: See response to 10.2 above to confirm absence of black grouse within this area.

Nightjar: We agree that Nightjar can be scoped out.

10.6 Do consultees consider there to be any local conservation priorities that the Proposed Development should seek to explore and serve to enhance the natural heritage of the Site for bird species and local area?

We believe that black grouse is the key species that may benefit from appropriate site and habitat management and consideration should be given to this species in any emerging Habitat management plan created for the site.

Ecology

11.1 Do consultees agree that the range of surveys carried out is appropriate and sufficient?

In relation to the ecology surveys proposed for this development, on the basis of the information provided, we are broadly content with the proposed approach. While the survey work is therefore likely to be sufficient to inform the EIA, we reserve full judgement until we have considered the full survey findings.

11.2 Do consultees agree with the approach to the surveys to be undertaken?

Broadly we reiterate our email advice of 17/06/2020 in addressing the need to strengthen the bat survey assessment through the use of the Ecobat tool with reference to our most recent guidance (2019) on Bats and onshore wind turbines **found here**. There is some evidence of a significant peak in bat activity from mid-August to mid-September at some wind farm sites in standing/clear-felled conifer plantations in south west Scotland, as such, we would need to be satisfied that the existing survey effort can account for this, especially given the likely mix of clear and key hole felling practices proposed.

If this is not possible, we recommend post-construction monitoring (static detectors) around the new turbines as this will identify if there have been changes in the pattern of bat activity since construction (e.g. have bats been attracted into the area since construction?).

In relation to *Nyctalus spp.* of bats, if there are any met masts available on site, in line with the above guidance, we recommend that these should be used for at-height monitoring where and when available.

11.3 Do consultees agree with those surveys which have been scoped out (e.g. for great crested newt [GCN] and wildcat)?

Yes although we note your commitment to consult with NatureScot if GCN are found on site (section 11.3.49).

11.4 Are there any other relevant consultees/ key sources who should be contacted with respect to baseline ecological information gathering and assessment?

We suggest that South Ayrshire Council and Dumfries and Galloway Council are also contacted in relation to ecological issues.

11.5 Do consultees agree with the proposed assessment of the potential effects as a result of the Proposed Development, including the approach to cumulative assessment?

Yes - the cumulative impact assessment should account for the existing and potential aquatic species found in the nearby watercourses – notably fresh water pearl mussel, eels, lampreys, salmon and sea trout.

We recommend that as a minimum, all areas directly (e.g. watercourse crossings) or indirectly (e.g. sediment run off) affected by the development and appropriate buffers up and downstream should have a habitat survey following the Scottish Fisheries Coordination Centre Method referenced below. This should inform the likelihood of the presence of salmonids, eels, freshwater pearl mussel and other protected/BAP species and so the need or otherwise for species specific surveys.

Our guidance on freshwater pearl mussel survey methods can be found on our website via <https://www.nature.scot/plants-animals-and-fungi/invertebrates/freshwater-invertebrates/freshwater-pearl-mussel>. The Scottish Fisheries Coordination Centre (SFCC) webpage <http://www.sfcc.co.uk/resources/habitat-surveying.html> provides links to the recommended SFCC habitat survey method (*Habitat Surveys Training Course Manual, Revised August 2007*), as well as other useful survey method information for fish. Note that where there is suitable habitat for freshwater pearl mussel, and particularly where salmonids are present, we would expect a freshwater pearl mussel survey to be carried out following our guidance. The exceptions for this would be the Borders, Lothian and some parts of Fife where freshwater pearl mussel are unlikely to be present.

As the proposed development site has permanent watercourses and water bodies on it, you should seek advice from SEPA regarding water crossings and the adequacy of any hydrological work undertaken as part of the EIA.

We recommend that all works should be carried out in accordance with relevant hydrological legislation (such as EC Water Framework Directive (2000/60/EC) and The Water Environment (Controlled Activities)) and SEPA's Pollution Prevention Guidelines to prevent negative impacts from the discharge of surface water into any watercourses within the site.

11.6 Are there any specific non-wind energy developments that consultees believe should be considered for inclusion within the cumulative impact assessment?

See response to 10.4 above.

11.7 Do consultees agree that effects upon statutory designated sites can be scoped out from the EIA?

Yes – although we welcome the developers commitment to consult with NatureScot over this issue if new information becomes available or if a site design change is proposed.

11.8 Do consultees consider there to be any local conservation priorities that the Proposed Development should seek to explore and serve to enhance the natural heritage of the Site and local area?

We recommend opportunities to protect and enhance the condition of the nearby Muck Water provisional wildlife site be explored with South Ayrshire Council. We further recommend that a Habitat Management Plan should be developed to enhance the range of protected mammals that are found on site, notably those (water vole and otter) utilising the onsite water features (permanent and seasonally present) and the linking watercourses that provide connectivity from this site to the wider landscape. Linking these features to the Annex 1 blanket bog habitat types on the site would ensure the existing mosaic of blanket bog, wet heath and acid grassland is maintained and where possible expanded.



RSPB Scotland

Magnus Hughson
The Scottish Government
Energy Consents Unit
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU.

18/11/2020

Dear Magnus,

**ELECTRICITY ACT 1989
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS
2017
REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR KNOCKADHAR
WIND FARM**

Many thanks for consulting RSPB Scotland on the scoping opinion for Knockadhar Wind Farm, ECU reference 00002153. Please find our response to the questions posed in Scoping Report Chapter 10, Ornithology, set out in the attached Annex 1.

We also note that the scoping report suggests that most of the site is covered in deep peat (>50cm deep). This is of concern, from both a carbon emissions and biodiversity point of view. We would wish to see the impacts to deep peat minimised through site design in addition to appropriate mitigation through a habitat management plan.

If you have any questions or would like to discuss any aspect of our response, please don't hesitate to get in touch.

Yours sincerely,

Redacted

Ed Tooth
Conservation Officer – Scottish Lowlands and Southern Uplands
ed.tooth@rspb.org.uk

Dumfries & Galloway Office
The Old School
Crossmichael
Castle Douglas
Kirkcudbrightshire
DG7 3AP

Tel 01556 670 464
Facebook: RSPBDumfriesandGalloway
Twitter: @RSPBDandG

rspb.org.uk



Annex 1

Do consultees agree that the range of surveys carried out is sufficient and appropriate?

We agree that the range of surveys are sufficient and appropriate, however, we do have concerns about the coverage of the vantage point surveys and the location of VP1. It appears that a small but not insignificant area of open ground, within the 500m turbine buffer, has not been covered by any of the vantage points as shown in figure 10.2. We also have concerns that the location of VP1 could have affected the flight activity of birds over the open ground due to its exposed location within the open ground habitat.

Are there any other relevant consultees/key sources who should be contacted with respect to baseline ornithological information gathering?

No, we believe that all the relevant consultees and key sources have been contacted.

Do consultees agree with the proposed assessment of the potential effects as a result of the Proposed Development, including the approach to cumulative assessment?

Yes, we are satisfied with the proposed approach.

Are there any specific non-wind energy developments that consultees believe should be considered for inclusion within the cumulative impact assessment?

No, we are not aware of any other developments that should be considered as part of the cumulative impact assessment.

Do consultees agree that effects upon statutory designated sites, black grouse and nightjar can be scoped out from the EIA?

Yes, due to the distance of the development to the Glen App and Galloway Moors SPA, combined with the apparent lack of hen harrier activity, we are satisfied that this designated site can be scoped out. We also agree that black grouse and nightjar can be scoped out, given the absence of records from the species-specific surveys carried out and desktop records.

Do consultees consider there to be any local conservation priorities that the Proposed Development should seek to explore and serve to enhance the natural heritage of the Site for bird species and local area?

Taking the results of the survey work into account, we would suggest that consideration should be given to protecting, enhancing and creating high-quality wader breeding habitat, especially for curlew and lapwing. This work should be appropriately located, at least 500m from existing forestry to avoid the known negative impacts that plantation forestry can have on breeding waders, and at least 500m from any single turbine to avoid attracting birds unnecessarily close and thus increasing collision risk. We would welcome the opportunity to input to any such plans.

As part of the forestry felling program associated with this development, it is likely that compensatory planting will be required as per Scottish Forestry guidance. We would suggest that the main priority for this compensatory planting should be for native broadleaved woodland in appropriate locations to maximise benefits for biodiversity.

These suggestions are made without prejudice to any future responses we submit as part of the EIA consultation process.



Econsents_Admin@gov.scot

Magnus Hughson
Energy Consents Unit
The Scottish Government

02/12/2020

Dear Mr Hughson,

**ELECTRICITY ACT 1989
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND)
REGULATIONS 2017
REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR
KNOCKODHAR WIND FARM**

Thank you for your email of 30 October 2020 requesting a scoping response for the above proposed wind energy development. We gratefully acknowledge the additional time granted for this response.

The National Catalogue of Rights of Way does not show any rights of way affected by the area outlined in red on *Figure 1.1 Site Location*. As there is no definitive record of rights of way in Scotland, there may be other routes that meet the criteria to be rights of way but have not been recorded as they have not yet come to our notice.

You will no doubt be aware there may now be general access rights over any property under the terms of the Land Reform (Scotland) Act 2003. It is also worth bearing in mind Core Paths Plans, prepared by local authorities as part of their duties under this Act.

It appears that, as yet, there has been no consideration of public recreational access either across, or in the vicinity of, the application site. It should be noted that right of way SKC3 lies to the east of the application site and a route promoted in our popular publication *Scottish Hill Tracks* lies to the south. For information maps showing right of way SKC3 and Scottish Hill Track 68 *Pinwherry to Kirrieroch* are enclosed. ScotWays would anticipate that the effects on users of these routes, be taken into account and that recreational access takers be considered as potential receptors.

In addition to the routes in the immediate vicinity of the site, noted above, we would request that the effects of this development on public recreational access over a wider area be considered: if required by the applicant to inform the Environmental Impact Assessment, maps of wider search areas are available from the Society.

Although we understand that there is very little guidance regarding the siting of turbines in relation to established paths and rights of way, we would like to draw your attention to the following:

The Scottish Rights of Way and Access Society, 24 Annandale Street, Edinburgh EH7 4AN (Registered Office)
0131 558 1222 info@scotways.com www.scotways.com

ScotWays is a registered trade mark of the Scottish Rights of Way and Access Society, a company limited by guarantee.
Registered Company Number: SC024243. Scottish Charity Number: SC015460.

Extract from the Welsh Assembly Government's Technical Advice Note on Renewable Energy (TAN 8)

Proximity to Highways and Railways

2.25 It is advisable to set back all wind turbines a minimum distance, equivalent to the height of the blade tip, from the edge of any public highway (road or other public right of way) or railway line.

As well as direct impacts on public access, impacts on recreational amenity are of interest to the Society as are impacts of wind farms on the wider landscape. We ask that these are taken into account and we will consider this further should this proposal lead to a planning application.

The Society is aware of several wind farm developments, at different stages in the planning process, in the local area. We ask that the cumulative impact of these proposed, and any consented, developments is taken into account.

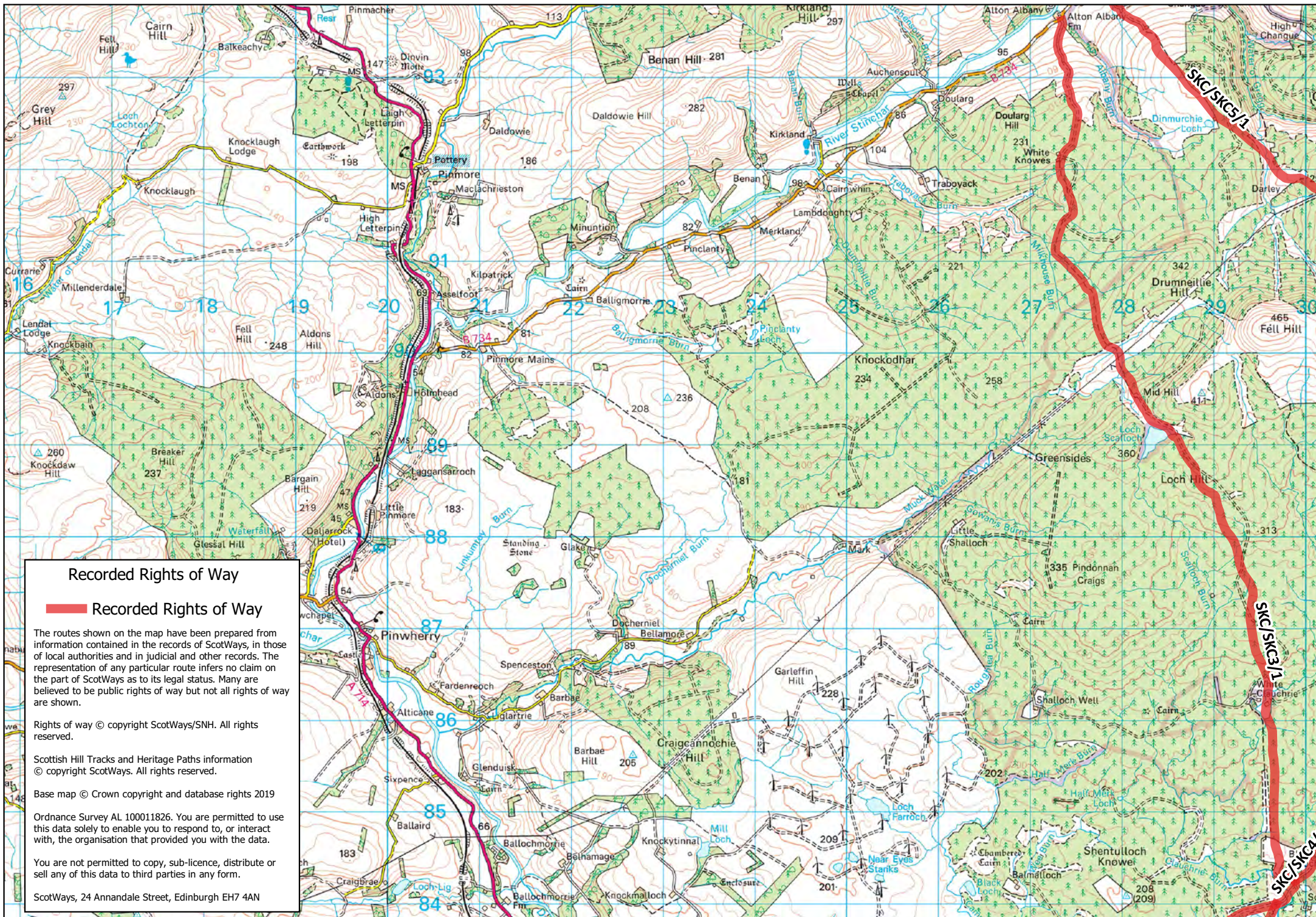
I hope the information provided is useful to you. Please do not hesitate to contact me if you need more detail or if you have any queries.

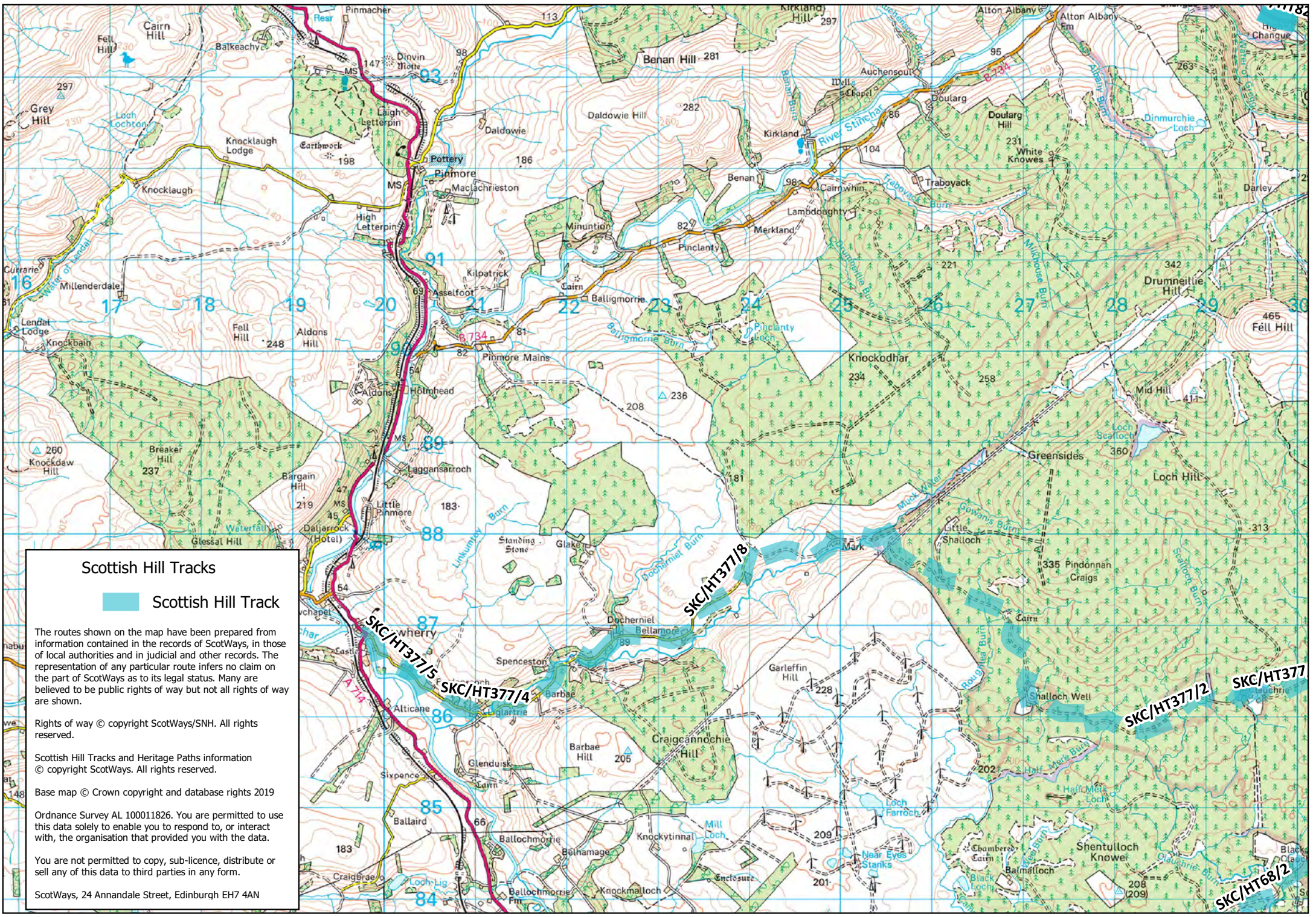
Yours sincerely,

Redacted

Lynda L Grant
Access Officer

Cc Ruth Highgate, Savills





Scottish Hill Tracks



Scottish Hill Track

The routes shown on the map have been prepared from information contained in the records of ScotWays, in those of local authorities and in judicial and other records. The representation of any particular route infers no claim on the part of ScotWays as to its legal status. Many are believed to be public rights of way but not all rights of way are shown.

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Scottish Hill Tracks and Heritage Paths information © copyright ScotWays. All rights reserved.

Base map © Crown copyright and database rights 2019

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ScotWays, 24 Annandale Street, Edinburgh EH7 4AN

SKC/HT377/8

SKC/HT377/5

SKC/HT377/4

SKC/HT377/2

SKC/HT377

SKC/HT68/2

Tuesday, 03 November 2020



Local Planner
Energy Consents Unit
5 Atlantic Quay
Glasgow
G2 8LU

Development Operations
The Bridge
Buchanan Gate Business Park
Cumbernauld Road
Steps
Glasgow
G33 6FB

Development Operations
Freephone Number - 0800 3890379
E-Mail - DevelopmentOperations@scottishwater.co.uk
www.scottishwater.co.uk

Dear Sir/Madam

SITE: Knockodhar Wind Farm, South Ayrshire, KA26 0SN
PLANNING REF: ECU0002153
OUR REF: DSCAS-0025626-V3S
PROPOSAL: Proposed wind farm for up to 32 turbines of up to 200 metres to tip height, energy storage system and associated infrastructure and access

Please quote our reference in all future correspondence

[Audit of Proposal](#)

Scottish Water has no objection to this planning application; however, the applicant should be aware that this does not confirm that the proposed development can currently be serviced and would advise the following:

[Drinking Water Protected Areas](#)

A review of our records indicates that there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed activity.

[Surface Water](#)

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.

There may be limited exceptional circumstances where we would allow such a connection for brownfield sites only, however this will require significant justification from the customer taking account of various factors including legal, physical, and technical challenges.



SW Public
General

To find out more about connecting your property to the water and waste water supply visit:



So, how are we doing?

We'd love to know what we're doing well or could do better. We promise we're listening, [click here](#) to tell us...



In order to avoid costs and delays where a surface water discharge to our combined sewer system is anticipated, the developer should contact Scottish Water at the earliest opportunity with strong evidence to support the intended drainage plan prior to making a connection request. We will assess this evidence in a robust manner and provide a decision that reflects the best option from environmental and customer perspectives.

General notes:

- ▶ Scottish Water asset plans can be obtained from our appointed asset plan providers:
 - ▶ Site Investigation Services (UK) Ltd
 - ▶ Tel: 0333 123 1223
 - ▶ Email: sw@sisplan.co.uk
 - ▶ www.sisplan.co.uk

I trust the above is acceptable however if you require any further information regarding this matter please contact me on **0800 389 0379** or via the e-mail address below or at planningconsultations@scottishwater.co.uk.

Yours sincerely,

Planning Application Team

Development Operations Analyst

developmentoperations@scottishwater.co.uk

Scottish Water Disclaimer:

"It is important to note that the information on any such plan provided on Scottish Water's infrastructure, is for indicative purposes only and its accuracy cannot be relied upon. When the exact location and the nature of the infrastructure on the plan is a material requirement then you should undertake an appropriate site investigation to confirm its actual position in the ground and to determine if it is suitable for its intended purpose. By using the plan you agree that Scottish Water will not be liable for any loss, damage or costs caused by relying upon it or from carrying out any such site investigation."



SW Public
General

To find out more about connecting your property to the water and waste water supply visit:



>>

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We'd love to know what we're doing well or could do better. We promise we're listening, [click here](#) to tell us...



2 December 2020

Magnus Hughson
The Scottish Government
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

By email only to: Econsents_Admin@gov.scot

Dear Sir

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Knockodhar Wind Farm
North Of Pinwherry

Thank you for consulting SEPA on the scoping opinion for the above development proposal by your email received on 30 October 2020.

Advice to the planning authority

We consider that the following key issues must be addressed in the Environmental Impact Assessment process. To **avoid delay and potential objection**, the information outlined below and in the attached appendix must be submitted in support of the application.

- a) Map and assessment of all engineering activities in or impacting on the water environment including proposed buffers, details of any flood risk assessment and details of any related CAR applications;
- b) Map and assessment of impacts upon Groundwater Dependent Terrestrial Ecosystems and buffers;
- c) Map and assessment of impacts upon groundwater abstractions and buffers;
- d) Peat depth survey and table detailing re-use proposals;
- e) Map and table detailing forest removal;
- f) Map and site layout of borrow pits;
- g) Schedule of mitigation including pollution prevention measures;

- h) Borrow Pit Site Management Plan of pollution prevention measures;
- i) Map of proposed waste water drainage layout;
- j) Map of proposed surface water drainage layout;
- k) Map of proposed water abstractions including details of the proposed operating regime;
- l) Decommissioning statement.

Further details on these information requirements and the form in which they must be submitted can be found in the attached appendix. We also provide site specific comments in the following section which can help the developer focus the scope of the assessment.

1. Site specific comments

- 1.1 Turbine number 14 is sited very close to the 6m peat depth maximum at NX 255 1 8870. The NX 2423 8856 grid reference is between turbines 21 and 22. It is possible that Turbine 30 is also in a peat area and this should be confirmed. It would be preferable for the turbines and access tracks to be positioned in areas of shallower peat.
- 1.2 Deep peat at NX 2468 8986 is close to the site of construction compound B, the applicant should ensure this does not encroach on the deep peat, re-siting to a less sensitive area if necessary.
- 1.3 Turbines 8, 13, 17, 23 and 32 appear close to water courses, these must be positioned outwith the 50m buffers as per the guidance in Appendix 1.
- 1.4 Potential land contamination from former infilled areas outlined in Section 12.2.18 is a matter for the local authority.
- 1.5 Any INNS present on site must be dealt with in line with our guidance. SEPA Waste Policy provides [guidance](#) on the disposal of invasive non-native species and contaminated soils. Further information on invasive non-native species is available on our [website](#).
- 1.6 We have responded to questions that fall within our remit in Appendix 2 of this response.

Regulatory advice for the applicant

2. Regulatory requirements

- 2.1 Authorisation is required under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) to carry out engineering works in or in the vicinity of inland surface waters (other than groundwater) or wetlands. Inland water means all standing or flowing water on the surface of the land (e.g. rivers, lochs, canals, reservoirs).
- 2.2 Management of surplus peat or soils may require an exemption under The Waste Management Licensing (Scotland) Regulations 2011. Proposed crushing or screening will require a permit under The Pollution Prevention and Control (Scotland) Regulations 2012. Consider if other environmental licences may be required for any installations or processes.
- 2.3 A Controlled Activities Regulations (CAR) construction site licence will be required for management of surface water run-off from a construction site, including access tracks, which:
 - is more than 4 hectares,
 - is in excess of 5km, or

- includes an area of more than 1 hectare or length of more than 500m on ground with a slope in excess of 25°

See SEPA's [Sector Specific Guidance: Construction Sites \(WAT-SG-75\)](#) for details. Site design may be affected by pollution prevention requirements and hence we strongly encourage the applicant to engage in pre-CAR application discussions with a member of the regulatory services team in your local SEPA office.

- 2.4 Below these thresholds you will need to comply with [CAR General Binding Rule 10](#) which requires, amongst other things, that all reasonable steps must be taken to ensure that the discharge does not result in pollution of the water environment.
- 2.5 Details of regulatory requirements and good practice advice for the applicant can be found on the [Regulations section](#) of our website.

If you have any queries relating to this letter, please contact me by e-mail at planning.sw@sepa.org.uk.

Yours faithfully

Nicki Dunn
Senior Planning Officer
Planning Service

ECopy to: Magnus.Hughson@gov.scot;

Disclaimer

This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at this time. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning or similar application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application or similar application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue. For planning applications if you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found on our [website planning pages](#).

In line with government guidance a number of SEPA's SW planning service are now home working. Please do not leave telephone messages but email planning.sw@sepa.org.uk, not individual email addresses, and we will respond where possible by email. Please note that due to revised working arrangements because of the Covid -19 (Corona virus) outbreak we may take longer to respond to your email than usual.

Appendix 1: Detailed scoping requirements

This appendix sets out our scoping information requirements. There may be opportunities to scope out some of the issues below depending on the site. Evidence must be provided in the submission to support why an issue is not relevant for this site in order **to avoid delay and potential objection**.

If there is a delay between scoping and the submission of the application then please refer to our website for our latest information requirements as they are regularly updated; current best practice must be followed.

We would welcome the opportunity to comment on the draft submission. As we can process files of a maximum size of only 25MB the submission must be divided into appropriately named sections of less than 25MB each.

1. Site layout

1.1 All maps must be based on an adequate scale with which to assess the information. This could range from OS 1: 10,000 to a more detailed scale in more sensitive locations. Each of the maps below must detail all proposed upgraded, temporary and permanent site infrastructure. This includes all tracks, excavations, buildings, borrow pits, pipelines, cabling, site compounds, laydown areas, storage areas and any other built elements. Existing built infrastructure must be re-used or upgraded wherever possible. The layout should be designed to minimise the extent of new works on previously undisturbed ground. For example, a layout which makes use of lots of spurs or loops is unlikely to be acceptable. Cabling must be laid in ground already disturbed such as verges. A comparison of the environmental effects of alternative locations of infrastructure elements, such as tracks, may be required.

2. Engineering activities which may have adverse effects on the water environment

- 2.1 The site layout must be designed to avoid impacts upon the water environment. Where activities such as watercourse crossings, watercourse diversions or other engineering activities in or impacting on the water environment cannot be avoided then the submission must include justification of this and a map showing:
- a) All proposed temporary or permanent infrastructure overlain with all lochs and watercourses;
 - b) A minimum buffer of 50m around each loch or watercourse. If this minimum buffer cannot be achieved each breach must be numbered on a plan with an associated photograph of the location, dimensions of the loch or watercourse and drawings of what is proposed in terms of engineering works;
 - c) Detailed layout of all proposed mitigation including all cut off drains, location, number and size of settlement ponds.
- 2.2 If water abstractions or dewatering are proposed, a table of volumes and timings of groundwater abstractions and related mitigation measures must be provided.
- 2.3 Further advice and our best practice guidance are available within the water [engineering](#) section of our website. Guidance on the design of water crossings can be found in our [Construction of River Crossings Good Practice Guide](#).
- 2.4 Refer to Appendix 2 of our [Standing Advice](#) for advice on flood risk. Watercourse crossings must be designed to accommodate the 0.5% Annual Exceedance Probability (AEP) flows, or information provided to justify smaller structures. If it is thought that the development

could result in an increased risk of flooding to a nearby receptor then a Flood Risk Assessment must be submitted in support of the planning application. Our [Technical flood risk guidance for stakeholders](#) outlines the information we require to be submitted as part of a Flood Risk Assessment. Please also refer to [Controlled Activities Regulations \(CAR\) Flood Risk Standing Advice for Engineering, Discharge and Impoundment Activities](#).

3. Disturbance and re-use of excavated peat and other carbon rich soils

- 3.1 Scottish Planning Policy states (Paragraph 205) that "Where peat and other carbon rich soils are present, applicants must assess the likely effects of development on carbon dioxide (CO₂) emissions. Where peatland is drained or otherwise disturbed, there is liable to be a release of CO₂ to the atmosphere. Developments must aim to minimise this release."
- 3.2 The planning submission must a) demonstrate how the layout has been designed to minimise disturbance of peat and consequential release of CO₂ and b) outline the preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, drainage channels, cable trenches, or the storage and re-use of excavated peat. There is often less environmental impact from localised temporary storage and reuse rather than movement to large central peat storage areas.
- 3.3 The submission must include:
 - a) A detailed map of peat depths (this must be to full depth and follow the survey requirement of the Scottish Government's [Guidance on Developments on Peatland - Peatland Survey \(2017\)](#)) with all the built elements (including peat storage areas) overlain to demonstrate how the development avoids areas of deep peat and other sensitive receptors such as Groundwater Dependent Terrestrial Ecosystems;
 - b) A table which details the quantities of acrotelmic, catotelmic and amorphous peat which will be excavated for each element and where it will be re-used during reinstatement. Details of the proposed widths and depths of peat to be re-used and how it will be kept wet permanently must be included.
- 3.4 To avoid delay and potential objection proposals must be in accordance with [Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and Minimisation of Waste](#) and our [Developments on Peat and Off-Site uses of Waste Peat](#).
- 3.5 Dependent upon the volumes of peat likely to be encountered and the scale of the development, applicants must consider whether a full Peat Management Plan (as detailed in the above guidance) is required or whether the above information would be best submitted as part of the schedule of mitigation.
- 3.6 Please note we do not validate carbon balance assessments except where requested to by Scottish Government in exceptional circumstances. Our advice on the minimisation of peat disturbance and peatland restoration may need to be taken into account when you consider such assessments.

4. Disruption to Groundwater Dependent Terrestrial Ecosystems (GWDTE)

- 4.1 GWDTE are protected under the Water Framework Directive and therefore the layout and design of the development must avoid impact on such areas. The following information must be included in the submission:
 - a) A map demonstrating that all GWDTE are outwith a 100m radius of all excavations shallower than 1m and outwith 250m of all excavations deeper than 1m and proposed groundwater abstractions. If micro-siting is to be considered as a mitigation measure the distance of survey needs to be extended by the proposed maximum extent of micro-siting. The survey needs to extend beyond the site boundary where the

distances require it;

- b) If the minimum buffers above cannot be achieved, a detailed site specific qualitative and/or quantitative risk assessment will be required. We are likely to seek conditions securing appropriate mitigation for all GWDTE affected.

4.2 Please refer to [Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems](#) for further advice and the minimum information we require to be submitted.

5. Existing groundwater abstractions

5.1 Excavations and other construction works can disrupt groundwater flow and impact on existing groundwater abstractions, including private water supplies. The submission must include:

- a) A map demonstrating that all existing groundwater abstractions are outwith a 100m radius of all excavations shallower than 1m and outwith 250m of all excavations deeper than 1m and proposed groundwater abstractions. If micro-siting is to be considered as a mitigation measure the distance of survey needs to be extended by the proposed maximum extent of micro-siting. The survey needs to extend beyond the site boundary where the distances require it;
- b) If the minimum buffers above cannot be achieved, a detailed site specific qualitative and/or quantitative risk assessment will be required. We are likely to seek conditions securing appropriate mitigation for all existing groundwater abstractions affected.

5.2 Further information is required regarding Private Water Supplies (PWS) and their source locations (see Appendix 2, Section 4 of LUPS-GU4), and any other groundwater abstractions in relation to the proposed infrastructure. The most recent PWS information should be obtained from the Local Authority (South Ayrshire Council).

5.3 Please refer to [Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems](#) for further advice on the minimum information we require to be submitted.

6. Forest removal and forest waste

6.1 Key holing must be used wherever possible as large scale felling can result in large amounts of waste material and in a peak release of nutrients which can affect local water quality. The supporting information should refer to the current Forest Plan if one exists and measures should comply with the Plan where possible.

6.2 Clear felling may be acceptable only in cases where planting took place on deep peat and it is proposed through a Habitat Management Plan to reinstate peat-forming habitats. The submission must include:

- a) A map demarcating the areas to be subject to different felling techniques;
- b) Photography of general timber condition in each of these areas;
- c) A table of approximate volumes of timber which will be removed from site and volumes, sizes of chips or brash and depths that will be re-used on site;
- d) A plan showing how and where any timber residues will be re-used for ecological benefit within that area, supported by a Habitat Management Plan. Further guidance on this can be found in [Use of Trees Cleared to Facilitate Development on Afforested Land – Joint Guidance from SEPA, SNH and FCS.](#)

7. Borrow pits

- 7.1 Scottish Planning Policy states (Paragraph 243) that “Borrow pits should only be permitted if there are significant environmental or economic benefits compared to obtaining material from local quarries, they are time-limited; tied to a particular project and appropriate reclamation measures are in place.” The submission must provide sufficient information to address this policy statement.
- 7.2 In accordance with Paragraphs 52 to 57 of Planning Advice Note 50 [Controlling the Environmental Effects of Surface Mineral Workings](#) (PAN 50) a Site Management Plan should be submitted in support of any application. The following information should also be submitted for each borrow pit:
- a) A map showing the location, size, depths and dimensions;
 - b) A map showing any stocks of rock, overburden, soils and temporary and permanent infrastructure including tracks, buildings, oil storage, pipes and drainage, overlain with all lochs and watercourses to a distance of 250 metres. You need to demonstrate that a site specific proportionate buffer can be achieved. On this map, a site-specific buffer must be drawn around each loch or watercourse proportionate to the depth of excavations and at least 10m from access tracks. If this minimum buffer cannot be achieved each breach must be numbered on a plan with an associated photograph of the location, dimensions of the loch or watercourse, drawings of what is proposed in terms of engineering works;
 - c) You need to provide a justification for the proposed location of borrow pits and evidence of the suitability of the material to be excavated for the proposed use, including any risk of pollution caused by degradation of the rock;
 - d) A ground investigation report giving existing seasonally highest water table including sections showing the maximum area, depth and profile of working in relation to the water table;
 - e) A site map showing cut-off drains, silt management devices and settlement lagoons to manage surface water and dewatering discharge. Cut-off drains must be installed to maximise diversion of water from entering quarry works;
 - f) A site map showing proposed water abstractions with details of the volumes and timings of abstractions;
 - g) A site map showing the location of pollution prevention measures such as spill kits, oil interceptors, drainage associated with welfare facilities, recycling and bin storage and vehicle washing areas. The drawing notes should include a commitment to check these daily;
 - h) A site map showing where soils and overburden will be stored including details of the heights and dimensions of each store, how long the material will be stored for and how soils will be kept fit for restoration purposes. Where the development will result in the disturbance of peat or other carbon rich soils then the submission must also include a detailed map of peat depths (this must be to full depth and follow the survey requirement of the Scottish Government’s [Guidance on Developments on Peatland - Peatland Survey \(2017\)](#)) with all the built elements and excavation areas overlain so it can clearly be seen how the development minimises disturbance of peat and the consequential release of CO₂;
 - i) Sections and plans detailing how restoration will be progressed including the phasing, profiles, depths and types of material to be used;

- j) Details of how the rock will be processed in order to produce a grade of rock that will not cause siltation problems during its end use on tracks, trenches and other hardstanding.

8. Pollution prevention and environmental management

- 8.1 One of our key interests in relation to developments is pollution prevention measures during the periods of construction, operation, maintenance, demolition and restoration. A schedule of mitigation supported by the above site specific maps and plans must be submitted. These must include reference to best practice pollution prevention and construction techniques (for example, limiting the maximum area to be stripped of soils at any one time) and regulatory requirements. They should set out the daily responsibilities of ECOWs, how site inspections will be recorded and acted upon and proposals for a planning monitoring enforcement officer. Please refer to [Guidance for Pollution Prevention \(GPPs\)](#).

9. Life extension, repowering and decommissioning

- 9.1 Proposals for life extension, repowering and/or decommissioning must demonstrate accordance with [SEPA Guidance on the life extension and decommissioning of onshore wind farms](#). Table 1 of the guidance provides a hierarchical framework of environmental impact based upon the principles of sustainable resource use, effective mitigation of environmental risk (including climate change) and optimisation of long term ecological restoration. The submission must demonstrate how the hierarchy of environmental impact has been applied, within the context of latest knowledge and best practice, including justification for not selecting lower impact options when life extension is not proposed.
- 9.2 The submission needs to demonstrate that there will be no discarding of materials that are likely to be classified as waste as any such proposals would be unacceptable under waste management licensing. Further guidance on this may be found in the document [Is it waste - Understanding the definition of waste](#).

Appendix 2: Scoping questions within our remit

This appendix sets out our response to questions posed in the scoping report.

Chapter 11 Ecology

Do consultees agree that the range of surveys carried out is appropriate and sufficient?

For SEPA's purposes we are happy that Phase 1, NVC and fish habitat surveys have been carried out. The fish survey also considered habitat suitability for freshwater pearl mussel.

Do consultees agree with the approach to the surveys to be undertaken?

Consultee states that vegetation surveys will be updated should scheme design change, this is acceptable.

Further surveys to monitor fish/ FWPM throughout the project would be required as mitigation if buffers to sensitive receptors are less than recommended.

Do consultees consider there to be any local conservation priorities that the Proposed Development should seek to explore and serve to enhance the natural heritage of the Site and local area?

From the Ayrshire LBAP - Lowland Raised Bog highlighted is a priority habitat for the region. The applicant should consider whether some restoration can be implemented. There is blanket bog (Annex 1 habitat) and areas of felled plantation could be investigated for potential restoration if bog was present there before forestry was established.

Muck Water or any other adjacent local wildlife site - possible candidates for management work.

Chapter 12 Geology, Hydrology and Hydrogeology

Is the spatial extent of the study area considered to be appropriate?

SEPA consider that the 2km buffer around the boundary of the site is appropriate.

Do consultees agree that discrete GWDTE, PWS and Flood Risk Assessment (FRA) reports are not required?

SEPA expect that GWDTE and PWS reports should be provided as part of the submission.

Flooding should be considered in line with our [new standing advice](#).

Chapter 19 Forestry

Do consultees agree with the proposed methodology in relation to forestry issues?

Minimising felling is beneficial as one of our main concerns is control of soil/ silt run off which can be an issue on commercial plantations, particularly where there are networks of drains which link up to natural water bodies. Reducing the ground disruption from felling should make it easier to control run off.

We would also request that felled areas are checked by an ECoW for any springs or flushes which may indicate GWDTE which were not identified during the original surveys due to tree cover, should any habitats be identified, they should be clearly marked and avoided.

The forestry plan to re-stock with native mixed tree species and leaving areas of open ground to improve biodiversity is good. Restoration of former bog areas should be considered.