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**The Scottish Government
Energy Consents Unit**

**Scoping Opinion on behalf of Scottish Ministers under the
Electricity Works (Environmental Impact Assessment) (Scotland)
Regulations 2017**

**Balgray Wind Farm
Fred. Olsen Renewables Limited**

24 April 2024

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1. Introduction

1.1 This scoping opinion is issued by the Scottish Government Energy Consents Unit on behalf of the Scottish Ministers to Fred.Olsen Renewables Limited, a company incorporated under the Companies Acts with company number 13633932 and having its registered office at 2nd Floor, 36 Broadway, London, England, SW1H 0BH (“the Company”) in response to a request received by the Energy Consents Unit on 10 January 2024 for a scoping opinion under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 in relation to the proposed Balgray Wind Farm (“the proposed development”). The request was accompanied by a scoping report.

1.2 The proposed development is located approximately 6km northeast of Lockerbie.

1.3 The proposed development is anticipated to comprise up to 7 wind turbines with tip heights up to 230 metres and battery energy storage

1.4 In addition to wind turbines there will be ancillary infrastructure including:

- Foundations supporting each wind turbine;
- Associated crane hard standings at each turbine location;
- External transformer housing;
- A network of onsite access tracks and associated watercourse crossings;
- A network of underground cables to connect the turbines to the onsite substation;
- An onsite control building and substation;
- A permanent anemometer mast or LiDAR compound for wind monitoring;
- Temporary construction and storage compound(s), laydown area(s) including car parking;
- Temporary borrow pits; and
- Site signage

1.5 The Company indicates the proposed development would be decommissioned after 35 years and the site restored in accordance with the decommissioning and restoration plan.

1.6 The proposed development is solely within the planning authority of Dumfries & Galloway Council.

1.7 The proposed development is situated at the same location, but with a smaller layout as a previous application for consent under section 36 of the Electricity Act 1989 (“the Act”) Newfield Wind Farm. The application for Balgray Wind Farm has been submitted by a different company. Dumfries and Galloway Council objected to the Newfield Wind Farm application and in accordance with the terms of Schedule 8 to the Act a Public Local Inquiry (“PLI”) was held. Following the PLI, the application was refused by ECU, on behalf of Scottish Ministers, on 06 June 2014 (ECU Reference ECU00005226) due to the significant adverse landscape and visual impact.

2. Consultation

2.1 Prior to the scoping opinion request a list of consultees was agreed between Fred. Olsen Renewables Limited and the Energy Consents Unit. A consultation on the scoping report was undertaken by the Scottish Ministers and this commenced on 16 February 2024. The consultation closed on 8th March 2024. Extensions to this deadline were granted to:-

- Galloway Fisheries Trust;
- Historic Environment Scotland;
- North Milk Community Council; and
- Scottish Environment Protection Agency

The Scottish Ministers also requested responses from their internal advisors Transport Scotland and Scottish Forestry. Standing advice from Marine Directorate - Science Evidence Data and Digital (MD-SEDD) has been provided with requirements to complete a checklist prior to the submission of the application for consent under section 36 of the Electricity Act 1989. All consultation responses received, and the standing advice from MD-SEDD, are attached in **ANNEX A Consultation responses** and **ANNEX B MD-SEDD Standing Advice**.

2.2 The purpose of the consultation was to obtain scoping advice from each consultee on environmental matters within their remit. Responses from consultees and advisors, including the standing advice from MD-SEDD, should be read in full for detailed requirements and for comprehensive guidance, advice and, where appropriate, templates for preparation of the Environmental Impact Assessment (EIA) report.

2.3 Unless stated to the contrary in this scoping opinion, Scottish Ministers expect the EIA report to include all matters raised in responses from the consultees and advisors.

2.4 The following organisations were consulted but did not provide a response:

- Dumfries & Galloway Council;
- British Horse Society;
- Civil Aviation Authority – Airspace;
- Eskdalemuir Community Council;
- Hoddum and Ecclefechan Community Council;
- John Muir Trust;
- Kirkmichael Community Council;
- Langholm, Ewes and Westerkirk Community Council;
- Lockerbie and District Community Council;
- Middlebie and Waterbeck Community Council;
- Mountaineering Scotland;
- Oban Airport;
- Royal Burgh of Lochmaben and District Community Council;
- Royal Four Towns Community Council;
- RSPB Scotland;
- Scottish Rights of Way and Access Society (ScotWays);

- Scottish Wildlife Trust;
- Scottish Wild Land Group (SWLG);
- The River Annan Trust and Salmon Fishery Boards;
- Visit Scotland;
- Wamphray Community Council; and
- Woodland Trust

2.5 With regard to those consultees who did not respond, it is assumed that they have no comment to make on the scoping report, however each would be consulted again in the event that an application for section 36 consent is submitted subsequent to this EIA scoping opinion.

2.6 The Scottish Ministers are satisfied that the requirements for consultation set out in Regulation 12(4) of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 have been met.

3. The Scoping Opinion

3.1 This scoping opinion has been adopted following consultation with Dumfries & Galloway Council, within whose area the proposed development would be situated, NatureScot (previously “SNH”), Scottish Environment Protection Agency (SEPA) and Historic Environment Scotland (HES), all as statutory consultation bodies, and with other bodies which Scottish Ministers consider likely to have an interest in the proposed development by reason of their specific environmental responsibilities or local and regional competencies.

3.2 Scottish Ministers adopt this scoping opinion having taken into account the information provided by the applicant in its request received by the Energy Consents Unit on 10 January 2024 in respect of the specific characteristics of the proposed development and responses received to the consultation undertaken. In providing this scoping opinion, the Scottish Ministers have had regard to current knowledge and methods of assessment; have taken into account the specific characteristics of the proposed development, the specific characteristics of that type of development and the environmental features likely to be affected.

3.3 A copy of this scoping opinion has been sent to Dumfries & Galloway Council for publication on their website. It has also been published on the Scottish Government energy consents website at www.energyconsents.scot.

3.4 Scottish Ministers expect the EIA report which will accompany the application for the proposed development to consider in full all consultation responses attached in **Annex A and Annex B**.

3.5 Scottish Ministers are satisfied with the scope of the EIA set out in section 3 of the scoping report.

3.6 In addition to the consultation responses, Ministers wish to provide comments with regards to the scope of the EIA report. The Company should note and address each matter.

3.7 The proposed development set out in the scoping report refers to wind turbines and other technologies including battery storage. Any application submitted under the Electricity Act 1989 requires to clearly set out the generation station(s) that consent is being sought for. For each generating station details of the proposal require to include but not limited to:

- the scale of the development (dimensions of the wind turbines and battery storage)
- components required for each generating station
- minimum and maximum export capacity of megawatts and megawatt hours of electricity for battery storage

3.8 Scottish Water advised that there were 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 development. Scottish Water also provided general advice which should be addressed in the EIA report, including any relevant mitigation measures required.

3.9 Scottish Ministers request that the Company investigates the presence of any private water supplies which may be impacted by the development. The EIA report should include details of any supplies identified by this investigation, and if any supplies are identified, the Company should provide an assessment of the potential impacts, risks, and any mitigation which would be provided.

3.10 Marine Directorate – Science Evidence Data and Digital (MD-SEDD) provide generic scoping guidelines for onshore wind farm and overhead line development (<https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/onshoreren>) which outline how fish populations can be impacted during the construction, operation and decommissioning of a wind farm or overhead line development and informs developers as to what should be considered, in relation to freshwater and diadromous fish and fisheries, during the EIA process.

3.11 In addition to identifying the main watercourses and waterbodies within and downstream of the proposed development area, developers should identify and consider, at this early stage, any areas of Special Areas of Conservation where fish are a qualifying feature and proposed felling operations particularly in acid sensitive areas.

3.12 MD-SEDD also provide standing advice for onshore wind farm or overhead line development (which has been appended at Annex B) which outlines what information, relating to freshwater and diadromous fish and fisheries, is expected in the EIA report. Use of the checklist, provided in Annex 1 of the standing advice, should ensure that the EIA report contains the required information; the absence of such information may necessitate requesting additional information which may delay the process. **Developers are required to submit the completed checklist in advance of their application submission.**

3.13 Scottish Ministers consider that where there is a demonstrable requirement for peat landslide hazard and risk assessment (PLHRA), the assessment should be undertaken as part of the EIA process to provide Ministers with a clear understanding of whether the risks are acceptable and capable of being controlled by mitigation measures. The Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments (Second Edition), published at <http://www.gov.scot/Publications/2017/04/8868>, should be followed in the preparation of the EIA report, which should contain such an assessment and details of mitigation measures. Where a PLHRA is not required clear justification for not carrying out such a risk assessment is required.

3.14 The scoping report identified viewpoints in Table 6.1 to be assessed within the landscape and visual impact assessment. Consultees did not request any additional viewpoints. However, Historic Environment Scotland state that 'viewpoints from within the site should be considered to inform the current EIA Report'.

3.15 The noise assessment should be carried out in line with relevant legislation and standards as detailed in section 10 of the scoping report. The noise assessment report should be formatted as per Table 6.1 of the IOA "A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise.

3.16 The Scottish Ministers are aware that the proposed development falls within the statutory safeguarded area around Eskdalemuir Seismological Recording Station. Scientific research has established that wind turbines of current design generate noise emissions that cause seismic vibrations which can interfere with the effective operation of the array. In order to ensure the United Kingdom can continue to implement its obligations in maintaining the Comprehensive Nuclear Test Ban Treaty, a noise budget has been allocated to regulate the development of wind turbines within a 50km radius of the array.

As advised by the Defence Infrastructure Organisation ("the DIO"), the budget has been set at 0.336nm rms and at present the reserved noise budget has been reached. Consequently, the DIO has stated there would be concerns if this proposal progresses to application based upon current information.

The Scottish Ministers request that the company keep up to date with the information provided by the Eskdalemuir Working Group (EWG) and contact the Defence infrastructure Organisation at the earliest opportunity to discuss any possible mitigation measures. Enquiries regarding the work being undertaken by EWG can be directed to onshorewindpolicy@gov.scot

3.17 As the maximum blade tip height of turbines exceeds 150m the LVIA as detailed in section 6 of the scoping report must include a robust Night Time Assessment with agreed viewpoints to consider the effects of aviation lighting and how the chosen lighting mitigates the effects.

3.18 It is recommended by the Scottish Ministers that decisions on bird surveys – species, methodology, vantage points, viewsheds & duration - site specific & cumulative – should be made following discussion between the Company and

NatureScot.

3.19 Where borrow pits are proposed as a source of on-site aggregate they should be considered as part of the EIA process and included in the EIA report detailing information regarding their location, size and nature. Ultimately, it would be necessary to provide details of the proposed depth of the excavation compared to the actual topography and water table, proposed drainage and settlement traps, turf and overburden removal and storage for reinstatement, and details of the proposed restoration profile. The impact of such facilities (including dust, blasting and impact on water) should be appraised as part of the overall impact of the working. Information should cover the requirements set out in '**PAN 50: Controlling the Environmental Effects of Surface Mineral Workings**'.

3.20 Ministers are aware that further engagement is required between parties regarding the refinement of the design of the proposed development regarding, among other things, surveys, management plans, peat, radio links, finalisation of viewpoints, cultural heritage, cumulative assessments and request that they are kept informed of relevant discussions.

4. Mitigation Measures

4.1 The Scottish Ministers are required to make a reasoned conclusion on the significant effects of the proposed development on the environment as identified in the environmental impact assessment. The mitigation measures suggested for any significant environmental impacts identified should be presented as a conclusion to each chapter. Applicants are also asked to provide a consolidated schedule of all mitigation measures proposed in the environmental assessment, provided in tabular form, where that mitigation is relied upon in relation to reported conclusions of likelihood or significance of impacts.

5. Conclusion

5.1 This scoping opinion is based on information contained in the applicant's written request for a scoping opinion and information available at the date of this scoping opinion. The adoption of this scoping opinion by the Scottish Ministers does not preclude the Scottish Ministers from requiring of the applicant information in connection with an EIA report submitted in connection with any application for section 36 consent for the proposed development.

5.2 This scoping opinion will not prevent the Scottish Ministers from seeking additional information at application stage, for example to include cumulative impacts of additional developments which enter the planning process after the date of this opinion.

5.3 Without prejudice to that generality, it is recommended that advice regarding the requirement for an additional scoping opinion be sought from Scottish Ministers in the event that no application has been submitted within 12 months of the date of this opinion.

5.4 It is acknowledged that the environmental impact assessment process is iterative and should inform the final layout and design of proposed developments. Scottish Ministers note that further engagement between relevant parties in relation to the refinement of the design of this proposed development will be required, and would request that they are kept informed of on-going discussions in relation to this.

5.5 Applicants are encouraged to engage with officials at the Scottish Government's Energy Consents Unit at the pre-application stage and before proposals reach design freeze.

5.6 When finalising the EIA report, applicants are asked to provide a summary in tabular form of where within the EIA report each of the specific matters raised in this scoping opinion has been addressed.

5.7 It should be noted that to facilitate uploading to the Energy Consents portal, the EIA report and its associated documentation should be divided into appropriately named separate files of sizes no more than 10 megabytes (MB).

Nicola Ferguson

Energy Consents Unit
24 April 2024

ANNEX A

Consultation

List of consultees who provided a response.

• Historic Environment Scotland;	A1-A7
• Scottish Environmental Protection Agency;	A8-A15
• NatureScot;	A16-A17
• Aberdeen Airport;	A18
• BT;	A19
• Crown Estate Scotland;	A20
• Defence Infrastructure Organisation;	A21-A23
• Edinburgh Airport;	A24
• Fisheries Management Scotland;	A25
• Galloway Fisheries Trust;	A26-A27
• Glasgow Airport;	A28
• Glasgow Prestwick Airport;	A29
• Highlands and Islands Airports;	A30
• HSE (Health and Safety Executive);	A31
• Joint Radio Company;	A32-A34
• National Grid;	A35
• NATS Safeguarding;	A36-A45
• Network Rail;	A46
• North Milk Community Council;	A47-A49
• Office for Nuclear Regulation;	A50
• Scottish Forestry;	A51
• Scottish Water;	A52-A53
• The Coal Authority;	A54
• The Met Office; and	A55
• Transport Scotland	A56-A57

Internal advice from areas of the Scottish Government was provided by officials from Transport Scotland, Scottish Forestry and Marine Directorate - Science Evidence Data and Digital (in the form of standing advice) included in **Annex B**.

See Section 2.4 above for a list of organisations that were consulted but did not provide a response. Any responses received after this Scoping Opinion is published will be added as an addendum and uploaded to the ECU Portal.



By email to: Nicola.Ferguson@gov.scot

Nicola Ferguson
Case Officer
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Onshore Electricity, Strategy and Consents
Directorate for Energy and Climate Change
Scottish Government

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

Our case ID: 300054201
Your ref: ECU00005016
28 March 2024

Dear Nicola Ferguson

**The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Balgray Wind Farm, Dumfries and Galloway
Scoping Report**

Thank you for your consultation which we received on 16 February 2024 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).

The relevant local authority archaeological and cultural heritage advisors 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 up to 7 turbines with a maximum blade tip height of 230m and an up to 43MW battery energy storage system alongside ancillary infrastructure such as access tracks, borrow pits, etc.

Scope of Assessment

We welcome that the environmental impact assessment (EIA) undertaken in support of the development will include an assessment of impacts on the historic environment. This assessment should be undertaken by a suitably experienced heritage professional with an understanding of heritage issues. The assessment should meet the requirements of [National Planning Framework 4](#), the [Historic Environment Policy for Scotland](#), and our [Managing Change guidance note on Setting](#). Additional guidance can also be found in the Cultural Heritage Appendix to the [EIA Handbook](#).



We are generally content with the scope and methodology for the assessment that are set out in the Scoping Report, though there are specific details relating to best practice that we wish to highlight. Further details are provided in the attached annex.

We are content with the approach to **scope in** assets within the inner study area, within 10km of the red line boundary (the outer study area), as well as assets beyond 10km where long distance views and intervisibility are important aspects of their settings. We also welcome that consideration will be given to assets where there is no predicted visibility from the asset but where views of or across the assets are important factors contributing to its cultural significance. We expect that all assets within the study areas be assessed, and if an asset is scoped out of more detailed assessment, then the reasoning should be presented in the EIA Report.

Historic Environment Scotland's Interests

Potential direct impacts

We can confirm there is one scheduled monument within the development boundary:

- **SM2265 Firtree Hill, fort**

We expect any potential direct physical impacts on this monument to be mitigated through design and for the EIA Report to detail the measures taken to ensure this. Any direct impacts on scheduled monuments would require [scheduled monument consent](#) from Historic Environment Scotland and, without prejudice to the outcome of individual applications, consent cannot be guaranteed.

We note that section 9.2 of the 'Hydrology, Geology and Hydrogeology' chapter indicates that a Phase 1 Peat Probing study, illustrated within Appendix D, was undertaken to support the Scoping Report. After reviewing the figure presented in Appendix D, it is highly likely that a peat probe location was within the legally protected scheduled area of Firtree Hill fort (SM2265). Most works on scheduled monuments, including ground-breaking works such as peat probing, require scheduled monument consent (SMC) from Historic Environment Scotland. We have no record of consent for peat probing within the scheduled area being applied for or granted. We will investigate this through our compliance procedures, information on which is set out on our website:

<https://www.historicenvironment.scot/advice-and-support/applying-for-consents/scheduled-monument-consent/compliance>

Potential setting impacts

There are a high number of nationally important historic environment assets in the vicinity of the development whose settings have the potential to be adversely impacted. The annex to this letter gives details of assets that have the potential to experience significant setting impacts. This list should not be treated as exhaustive and is only intended as a reference to those assets which appear most likely to be significantly impacted at this stage. Further information, such as visualisations and locations of access tracks, is required to allow us to understand whether the potential impacts would be capable of mitigation by design or whether the impacts would be of a level that would raise concerns such that we might object. Additional details are provided in the annex of this letter.

**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 <https://www.engineshed.scot/>.

We hope this is helpful. Please contact us if you have any questions about this response. The officer managing this case is Cailee Mellen and they can be contacted by phone on 0131 651 6807 or by email on cailee.mellen@hes.scot.

Yours sincerely

Historic Environment Scotland



ANNEX

Scope of Assessment

We are largely content with the methodology outlined in the Cultural Heritage chapter, as it aligns with the guidance found in the [EIA Handbook](#) and our [Managing Change guidance note on Setting](#). However, we would like to highlight the following points that we consider to be best practice:

Significance of Effect

We note that table 12.6 uses a matrix for significance of effect that is inconsistent with that which is outlined in the EIA Handbook, resulting in some outcomes potentially being classified of lesser significance (i.e. 'major/moderate effect rather than 'major' or 'moderate/minor' effect rather than 'moderate'). We recommend that the EIAR follows the assessment methodology laid out in Appendix 1 of the EIA Handbook.

Site Visits

We welcome that that site visits are proposed to designated assets within the study area and/or ZTV that may experience potential impacts on their setting. However, we note that Section 12.2.3 proposes scoping out a site visit to the inner study area (i.e. the proposed development site), as a walkover survey was conducted in 2020. We strongly recommend that a site visit be conducted to the development site and that viewpoints from within the site be considered to inform the current EIA Report. All site visits should be undertaken by a suitably experienced heritage professional with an understanding of heritage issues.

Visualisations

We note that visualisations are discussed in the Landscape and Visual Impact Assessment chapter (with Viewpoint 12 in particular being situated at Burnswark Hill Fort (SM667)) and in the Cultural Heritage chapter only as they pertain to the cumulative assessment, but further cultural heritage specific visualisations are likely to be required. If initial assessment identifies potential significant impacts on heritage assets, wireframe visualisations should be produced to help analyse those impacts. If this exercise confirms the potential impacts as being significant, then photomontages should also be prepared for the relevant assets. Further recommendations for site-specific visualisations are provided in the forthcoming section of this annex.

Mitigation

We note that the standard and additional mitigation outlined in section 12.2.4 of the Scoping Report refers only to mitigation relating to direct physical impacts within the proposed site boundary and that no specific approaches to mitigation measures for impacts on setting have been described. We highly recommend that where significant impacts on heritage assets are identified and prove capable of mitigation, this should be taken into account to inform the iterative design process in order to avoid or reduce those effects to a level that is no longer significant. This may involve exploring design options to change or reduce the development layout, turbine heights and number of turbines to identify whether significant adverse impacts can be mitigated.



Legislation

We note that the Scoping Report does not provide the legislation relevant to EIA and the historic environment. We expect these to be referenced in the Cultural Heritage chapter of the EIA Report.

Historic Environment Scotland's Interests

Scheduled Monuments

Our main concerns are the potential for physical impacts to the scheduled monument (SM2265) within the proposed development site boundary alongside potential impacts on the setting of monuments within and surrounding the site boundary. With the information currently provided at this stage, we advise that the following assets may experience potential significant impacts:

- **Firtree Hill, fort (SM2265)**
- **Hutton mote, motte (SM1)**
- **Broom Hill, fort 1400m NW of Shaw (SM3350)**
- **Gillesbie Cottages, moated site 160m NNE of (SM10478)**
- **Gillesbie Tower (SM10433)**
- **Castle Hill, fort (SM8366)**

Please note that these assets do not represent a comprehensive list, but rather an indication of the designated heritage assets that we are currently able to identify based on the details provided about the proposed development at this stage.

For each of the assets discussed above we recommend that, as a minimum, visualisations are provided for views outwards from the monuments to aid the assessment of potential impacts on their settings. If wireframes can be provided at an early stage, this may assist with both the potential to identify significant impacts and to scope out any monuments if significant impacts are not likely, as well as identify if mitigation by design is possible. It will also assist with identifying where photomontages will be required for detailed assessment in addition to wireframes. We would be happy to provide further advice on visualisations as the iterative design of the development progresses, however as noted above, it would be helpful if initial wireframes can be provided as early as possible.

We have particular concerns around potential significant adverse impacts on the following monuments:

- **Firtree Hill, fort (SM2265)**
The proposals should take care to avoid physical impact on this scheduled monument. Works to scheduled monuments require written permission, in the form of scheduled monument consent, obtained from Historic Environment Scotland beforehand. Without prejudicing any final decision in response to a resulting application, it is unlikely that consent would be granted for any work relating to this proposed development.



This monument is the remains of a prehistoric fort located on the western slopes of Firtree Hill overlooking a valley created by the Kirkcroft burn and its tributaries. It is located within the proposed site boundary, approximately 250m northwest of a turbine 2. The fort is one of a range of designated and non-designated prehistoric defended settlement sites within the immediate and wider surrounding landscape. This includes the non-designated Roseburra fort (Canmore ID: 66758 / HER reference: MDG7108) which is located approximately 250m to the southwest of Firtree Hill fort. The close proximity of these two forts suggests a potential relationship between the monuments. Defended settlements like this fort were clearly located with regard to local and long-distance views towards their sites and away into the wider landscape. They were often prominent features within the landscape and intervisibility between these monuments are important characteristics of their settings.

We recommend that two additional visualisations be provided for Firtree Hill fort (SM2265) to aid the assessment:

- Firstly, from the undesignated Roseburra settlement (Canmore ID: 66758 / HER reference: MDG7108) towards the direction of Firtree Hill fort in order to understand the potential impact on the visual and spatial relationship between the two monuments.
 - Secondly, a visualisation from land in the valley of the Kirkcroft burn that the fort would have overlooked, looking broadly east towards the monument, such as from the track heading east from Hallhills farm.
- **Hutton mote, motte (SM1)**
This monument comprises the remains of an early castle and natural bailey dating to the medieval period, located approximately 300m north of the proposed site boundary. It is located on a prominent knoll to the east of the glen of the Dryfe Water and was clearly designed to offer a location to dominate the immediate and wider landscape. This is demonstrated by the motte being a very prominent feature in views towards it from the surrounding area and outward views from the motte summit which are a key characteristic of its setting.

There is potential that the proposed turbines will appear in key views from or towards these two monuments discussed above, in some instances potentially dominating the local and more distant landscape and detracting from our ability to understand, appreciate and experience them in their landscape setting. Further information, such as the aforementioned visualisations and locations of access tracks, is required to allow us to understand whether the potential impacts would be capable of mitigation by design or whether the impacts would be of a level that would raise concerns such that we might object.

Category A-Listed Buildings & Gardens and Designed Landscapes

We are content with the proposed scope of assessment for Category A-listed buildings and Inventory gardens and designed landscapes.

We can confirm that the following assets are within the 10km outer study area:

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

Scottish Charity No. **SC045925**

VAT No. **GB 221 8680 15**



- **Millhouse Bridge Village (LB3324)**
- **Jardine Hall Stable Block (LB3340)**
- **Jardine Hall, Walled Garden and Gateways (LB3341)**
- **Shillahill Bridge (LB3453)**
- **Boreland Village, Hutton, and Corrie Parish Church (LB9911)**
- **Kinnel Bridge (LB9950)**
- **Millhouse Bridge Village, Millhouse Bridge (LB9954)**
- **Spedlins Tower (LB9965)**
- **Elshields Tower and Adjoining House (LB9970)**
- **Halleaths Former Stables (LB9971)**
- **Ross Mains (LB10353)**
- **Castlemilk (LB16888)**
- **Castlemilk, Driveway Bridge (LB16890)**
- **Lochmaben Parish Church Boundary Wall and Gatepiers (LB37539)**
- **High Street, Tolbooth including iron lamps (LB37541)**
- **High Street, Town Hall (LB37579)**
- **Raehills (GDL00322)**

Historic Environment Scotland

28 March 2024



Nicola Ferguson
Energy Consents Unit
The Scottish Government

Our Ref: PCS-20000549
Your Ref: ECU00005016

By email only to: Econsents_Admin@gov.scot

SEPA Email Contact:
planning.south@sepa.org.uk

29 February 2024

Dear Nicola

**Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Proposed wind farm of up to 7 no Turbines, maximum tip height 230m and battery
storage of approximately 50 MW
Balgray Wind Farm, near Lockerbie, Dumfries and Galloway**

Thank you for consulting SEPA for an EIA scoping opinion for the above project on 16 February 2024.

Advice for the determining authority

To **avoid delay and potential objection** the EIA submission must contain a scaled plan of sensitivities, for example peat, GWDTE, proximity to watercourses, overlain with proposed development. This is necessary to ensure the EIA process has informed the layout of the development to firstly avoid, and then reduce then mitigate significant impacts on the environment. We consider the issues covered in Appendix 1 below must be addressed to our satisfaction in the EIA process.

1. Site specific comments

- 1.1 National Planning Framework 4 (NPF4) has recently been published. The guidance referenced in this response is being reviewed and updated to reflect the new policies. It will still provide useful and relevant information but some parts may be updated in the future. Please refer to our [website](#) for most up to date information requirements.
- 1.2 We support scoping hydrology, geology and hydrogeology into the EIA and welcome this will assess impacts on peat, watercourses, GWDTE and private water supplies as discussed in Section 9.4 of the Scoping Report. Appendix 1 attached below details our information requirements in relation to these issues.
- 1.3 We would welcome engagement with the applicant at an early stage to discuss any of the issues raised in this letter once further peat probing and habitat survey work has been completed and the layout developed further as a result.



Chair
Lisa Tennant

CEO
Nicole Paterson

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ML1 4WQ

Tel: 03000 99 66 99
www.sepa.org.uk

Peat and carbon rich soils

- 1.4 We welcome early sight of the Phase 1 peat probing survey (Appendix D) and understand targeted surveys are planned for infrastructure where peat is present. We require this work adheres to the [Peatland Survey – Guidance on Developments on Peatland \(2017\)](#). It is our expectation the development must avoid peatland in near natural condition and peat > 1m depth.
- 1.5 Based on the peat depth survey information provided we agree this appears to show a general absence of peat, peaty soils / carbon rich soils across most of the site. This means there is space to ensure the site layout avoids those areas with peat depths <1m. The indicative layout appears to achieve this except for a wind turbine proposed in the northwest (closest to White Hill) which encroaches on peat > 1m. We request the site design is modified so that the development avoids peat > 1m depth.
- 1.6 Based on the SNH Carbon and Peatland Map 2016 an area of Class 3 peat is on site and it appears two of the wind turbines are planned on this. As Class 3 includes carbon-rich soil and sometimes deep peat, further probing around the planned infrastructure will be needed there to ensure deep peat is avoided. A peat condition assessment should also be undertaken to identify pristine or near-natural areas which must be avoided, and to identify modified, drained and actively eroding areas for restoration and enhancement.

Site ecology and GWDTE

- 1.7 We welcome the intention to include an assessment of GWDTE based on National Vegetation Classification (NVC) mapping. We understand it is currently considered unlikely that areas of moderate or high potential GWDTE will actually be groundwater dependent. In order to agree with that conclusion, we would need to have the opportunity to review the ecology surveys and assessment of the site. We also note the reference to a wetland area and small springs in Section 9.2 of the report so would expect these to be mapped and identified and, along with other potential GWDTE identified, assessed and appropriate buffers implemented in accordance with our [guidance](#) as part of the EIAR. If GWDTE are identified a site-specific assessment of the likelihood that habitats are true GWDTE will be required.
- 1.8 While we are broadly content with the proposed assessment approach in relation to UKHab we have been made aware of concerns regarding the use of this methodology for detailed surveys of wetland habitats, therefore until these issues are resolved, we will require a NVC survey at the application stage. These concerns relate to discrepancies in habitat definitions of common Scottish wetland communities; ambiguity in correspondences to NVC types; unclear descriptions of physical characteristics and the limitation in representation of mosaics of multiple habitat types (typical in upland and wetland areas).
- 1.9 The approach in relation to the potential for a change in the baseline seems sensible, i.e. calculating habitat loss for areas to be planted with commercial forestry based on the forestry extent if it is consented. Particularly in context of the lifespans of the plantation and wind farm. However, we recommend that the wind farm developer and forestry agent working on the woodland creation scheme work collaboratively to ensure that sensitive habitats identified through early survey work are not impacted by either proposal.

Site hydrology

1.10 From the Proposed Site Layout, we understand there are a many water features across the site (Hewke Burn, Hallhills Loch, Kirkcroft Burn, Rockhillflat Burn and Hope Burn) and at this stage it appears a number of wind turbines are proposed in close proximity to them. As per Section 2 in Appendix 1 below, it is our expectation that a 50m buffer is applied to all water features. We also recommend that where possible existing access tracks are reused and / or upgraded wherever possible to minimise the extent of new works on previously undisturbed ground.

2. Regulatory advice for the applicant

2.1 Details of regulatory requirements and good practice advice can be found on our [website](#). If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the local compliance team at: SWS@sepa.org.uk.

If you have queries relating to this letter, please contact us at planning.south@sepa.org.uk including our reference number in the email subject.

Your sincerely,

Simon Watt
Senior Planning Officer
Planning Service

Ecopy to: nicola.ferguson@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 - www.sepa.org.uk/environment/land/planning/](http://www.sepa.org.uk/environment/land/planning/)

Appendix 1: Detailed scoping requirements

This appendix sets out our minimum information requirements and we would welcome receipt and discussion around these prior to formal submission to avoid delays. 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 to **avoid delay and potential objection**. If there is a significant length of time between scoping and application submission the developer should check whether our advice has changed.

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 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 where 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 should be designed to minimise watercourse crossings and avoid other direct impacts on water features. The submission must include 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. Measures should be put in place to protect any downstream sensitive receptors.
- 2.2 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](#).
- 2.3 Refer to our [Flood Risk Standing Advice](#) for advice on flood risk. Crossings must be designed to accommodate the 0.5% Annual Exceedance Probability flows (with an appropriate allowance for climate change), or information provided to justify smaller structures. If it is considered the development could result in an increased risk of flooding to a nearby receptor then a Flood Risk Assessment (FRA) must be submitted. Our [Technical flood risk guidance for stakeholders](#) outlines the information we require to be submitted in an FRA. 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 Where proposals are on peatland or carbon rich soils the following should be submitted to address the requirements of NPF4 Policy 5:

- a) layout plans showing all permanent and temporary infrastructure, with extent of excavation required, which clearly demonstrates how the mitigation hierarchy outlined in NPF4 has been applied. These plans should be overlaid on:
 - i. peat depth survey (showing peat probe locations, colour coded using distinct colours for each depth category and annotated at a usable scale);
 - ii. peat depth survey showing interpolated peat depths;
 - iii. peatland condition mapping;
 - iv. National Vegetation Classification survey (NVC) habitat mapping.
- b) an outline Peat Management Plan (PMP);
- c) an outline Habitat Management Plan (HMP).

3.2 We have included more detailed advice on these requirements below.

a. Development design in line with the mitigation hierarchy

3.3 In order to protect peatland and limit carbon emissions from carbon rich soils, the submission should demonstrate that proposals:

- Avoid peatland in near natural condition, as this has the lowest greenhouse gas emissions of all peatland condition categories;
- Minimise the total area and volume of peat disturbance. Clearly demonstrate how the infrastructure layout design has targeted areas where carbon rich soils are absent or the shallowest peat reasonably practicable. Avoid peat > 1m depth;
- Minimise impact on local hydrology; and
- Include adequate peat probing information to inform the site layout and demonstrate that the above has been achieved. As a minimum this should follow the requirements of the [Peatland Survey – Guidance on Developments on Peatland](#).

3.4 The [Peatland Condition Assessment](#) photographic guide lists the criteria for each condition category and illustrates how to identify each condition category. This should be used to identify peatland in near natural condition and can be helpful in identifying areas where peatland restoration could be carried out.

3.5 In line with the requirements of Policy 5d of NPF4, the development proposal should include plans to restore and/or enhance the site into a functioning peatland system capable of achieving carbon sequestration.

b. The outline PMP

3.6 In addition to the above the PMP should also include:

- Information on peatland condition;
- Information demonstrating avoidance and minimisation of peat disturbance;
- Excavation volumes of acrotelmic, catotelmic and amorphous peat. These should include a contingency factor to consider variables such as bulking and uncertainties in the estimation of peat volumes;
- Proposals for temporary storage and handling;
- Reuse volumes in different elements of site reinstatement and restoration.

- 3.7 Handling and temporary storage of peat should be minimised. Catotelmic peat should be kept wet, covered by vegetated turves and re-used in its final location immediately after excavation. It is not suitable for use in verge reinstatement, re-profiling/landscaping, spreading, mixing with mineral soils or use in bunds.
- 3.8 Disposal of peat is not acceptable. It should be clearly demonstrated that all peat disturbed by the development can be used in site reinstatement (making good areas which have been disturbed by the development) or peatland restoration (using disturbed peat for habitat restoration or improvement works in areas not directly impacted by the development, which may need to include locations outwith the development boundary).
- 3.9 The faces of cut batters, especially in peat over 1m, should be sealed to reduce water loss of the surrounding peat habitats, which will lead to indirect loss of habitat and release of greenhouse gases. This may be achieved by compression of the peat to create an impermeable subsurface barrier, or where slope angle is sufficiently low, by revegetation of the cut surface.

c. The outline HMP

3.10 The outline HMP should include:

- Proposals for reuse of disturbed peat in habitat restoration, if relevant;
- Details of restoration to compensate for the area of peatland habitat directly and indirectly impacted by the development;
- Outline proposals for peatland enhancement in other areas of the site;
- Monitoring proposals.

3.11 To support the principle of peat reuse in restoration the applicant should demonstrate that they have identified locations where the addition of excavated peat will enhance the wider site into a functional peatland system capable of achieving carbon sequestration. The following information is required:

- Location plan of the proposed peatland re-use restoration area(s), clearly showing the size of individual areas and the total area to be restored;
- Photographs, aerial imagery, or surveys to demonstrate that the area identified is appropriate for peat re-use and can support carbon sequestration. This should include consideration of an appropriate hydrological setting and baseline peatland condition.

3.12 In addition, if any proposed re-use restoration areas are outwith the ownership of the applicant, information should be provided to demonstrate agreement in principle with the landowner, including agreed timescales for commencement of the works, and proposed management measures to ensure the restored areas can be safeguarded in perpetuity as a peatland.

3.13 NatureScot's [technical compendium of peatland restoration techniques](#) provides a useful overview of the procedural and technical requirements for peatland restoration.

4. Disruption to GWDTE and existing groundwater abstractions

- 4.1 Groundwater Dependent Terrestrial Ecosystems (GWDTE) are protected under the Water Framework Directive. Excavations and other construction works can disrupt groundwater flow and impact on GWDTE and existing groundwater abstractions. The layout and design of the development must avoid impacts on such areas. A National Vegetation Classification survey which includes the following information should be submitted:
- a) A map demonstrating all GWDTE and 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. The survey needs to extend beyond the site boundary where the distances require it.
 - b) If the minimum buffers cannot be achieved, a detailed site specific qualitative and/or quantitative risk assessment will be required. 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. Forest removal and forest waste

- 5.1 If forestry is present on the site, we prefer a site layout which avoids large scale felling as this can result in large amounts of waste material and a peak in release of nutrients which can affect local water quality. The submission must include a map with the boundaries of where felling will take place and a description of what is proposed for this timber in accordance with [Use of Trees Cleared to Facilitate Development on Afforested Land – Joint Guidance from SEPA, SNH and FCS](#).

6. Borrow pits

- 6.1 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 250m. 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;
 - c) Sections and plans detailing how restoration will be progressed including the phasing, profiles, depths and types of material to be used.

7. Pollution prevention and environmental management

- 7.1 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 Ecological Clerk of Works, how site inspections will be recorded and acted upon and proposals for a planning monitoring enforcement officer. Please refer to the [Guidance for Pollution Prevention](#) (GPPs) and our [water run-off from construction sites webpage](#) for more information.

8. Life extension, repowering and decommissioning

- 8.1 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.
- 8.2 The submission needs to state 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](#)



Nicola Ferguson
Energy Consents Unit
Scottish Government
5 Atlantic Quay
150 Broomielaw
Glasgow G28LU

05 March 2024

Our ref: CDM174270

By email to: Nicola.Ferguson@gov.scot

Dear Nicola

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR BALGRAY WIND FARM

Thank you for consulting NatureScot on the above scoping document, which is for a development of up to 7 wind turbines with a maximum tip height of 230 metres. The site is located approximately 6km northeast of Lockerbie.

Summary

The scope outlined for the Environmental Impact Assessment (EIA) is in line with our pre-application guidance for onshore wind farms. We have provided comment in relation to topics relevant to our remit as well as addressing questions raised in the scoping document.

Landscape and visual effects

Significant landscape and visual impacts are likely to arise due to this application and there may be scope to reduce these impacts through appropriate design mitigation. However, our approach to advising on wind farm applications is to focus upon impacts on Scotland's landscapes that potentially raise issues of national interest (i.e. as identified in our guidance). We agree with the scoping assessment that there will be no potential for significant effects on the East Stewartry Coast National Scenic Area (NSA) and that this can be scoped out of the assessment.

Ornithology

NatureScot agrees that the scope of the ornithological survey and assessment seems appropriate for the site although we reserve the right to comment further once the full assessment and data are presented in the EIA.

Ecology

We are happy with the scope presented for ecological interests and support the work proposed to assess the site for Marsh Fritillary, which is a UK biodiversity action plan species and is a rarity in Southern Scotland.

With regards the potential change in baseline if the site is approved for forestry, we are happy that the assessment considers the impacts on habitats as they stand at present. Should the forestry proposal gain consent prior to submission for Balgray, then we do not perceive this as a significant issue in terms of the EIA. Changes to habitat composition and associated impacts will be dealt with through the forestry application process. In terms of measuring habitat loss, we agree that this is calculated based on the habitat present for the majority of the project. It is worth noting that, if the land is planted with forestry, the interaction between the windfarm and bats may become a consideration that would otherwise not be an issue and may require assessment.

Biodiversity net gain

Policy 3 of National Planning Framework 4 (NPF4) requires that new developments deliver positive net gain for biodiversity. For a wind farm, the main mode of delivery is through the implementation of a habitat management plan (HMP) that compensates for any residual effects resulting from the proposal. We strongly advise that the application includes a well-developed HMP that allows consultees to assess the merits of the proposal in line with NPF4. We recommend taking account of our [developing with nature](#) guidance and our [habitat management plans](#) guidance to inform the proposal and plans.

If you have any questions in relation to the above comments, please get in touch.

Yours sincerely

Dylan De Silva

Operations Officer

Southern Scotland Unit

dylan.desilva@nature.scot

From: [#ABZ Safeguarding](#)
To: [Nicola Ferguson](#)
Subject: RE: Request for Scoping Opinion Balgray Wind Farm
Date: 21 February 2024 13:40:16
Attachments: [image001.png](#)
[image139170.png](#)
[image783260.png](#)
[image349799.png](#)
[image821907.png](#)
[image037811.png](#)
[image519515.png](#)
[image488370.png](#)
[image636663.png](#)
[image499753.png](#)

This proposal is located outwith the consultation zone for Aberdeen Airport. As such we have no comment to make and need not be consulted further.

Kind regards
Kirsteen

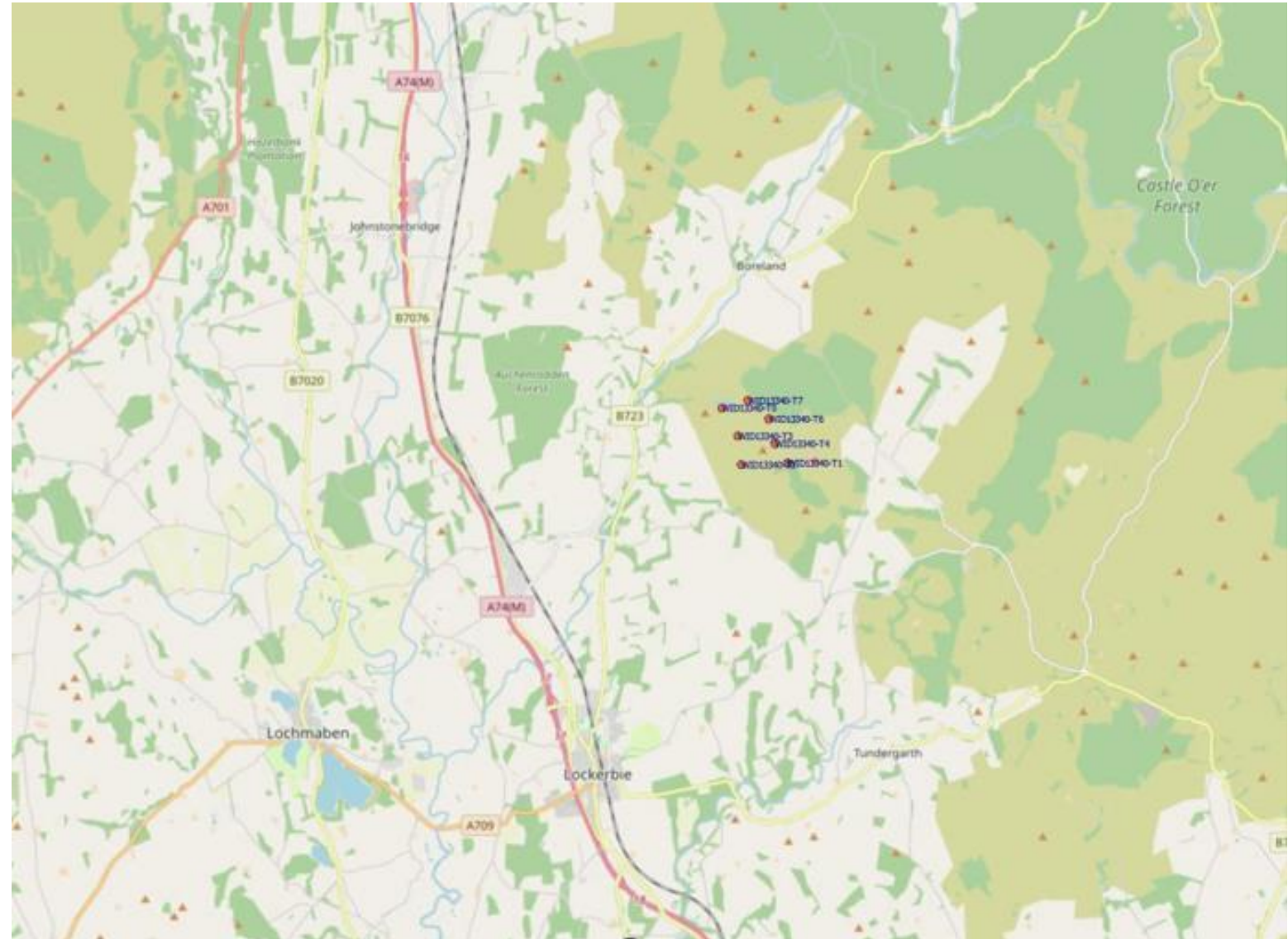


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OUR REF:- WID13340

We have studied the proposed windfarm development with respect to EMC and related problems to BT point-to-point microwave radio links.

The conclusion is that the Project indicated should not cause interference to BT's current and presently planned radio network.



From: [Olivia Morrad](#)
To: [Nicola Ferguson](#)
Subject: 20240407 Request for Scoping Opinion Balgray Wind Farm - Email to GovScot
Date: 07 April 2024 12:46:39
Attachments: [image001.png](#)

Good afternoon,

Thank you for your email.

I write to confirm that the assets of Crown Estate Scotland are not affected by this proposal and we therefore have no comments to make.

Kind regards

Olivia Morrad
Assistant Portfolio Co-ordinator
Crown Estate Scotland

t: 0131 376 1506 / 07407378899

Our team are currently working from home. Mail is occasionally being collected from our offices (addresses are at www.crownestatescotland.com/contact-us). Where possible, please email or call us rather than post mail.

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Defence Infrastructure Organisation

Your Reference: ECU00005016

Our Reference: DIO10059970

Nicola Ferguson
Energy Consents Unit
Scottish Government
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Teena Oulaghan
Safeguarding Manager
Ministry of Defence
Safeguarding Department
St George's House
DIO Headquarters
DMS Whittington
Lichfield
Staffordshire
WS14 9PY

Telephone [MOD]: 07970 170934

E-mail: teena.oulaghan100@mod.gov.uk

By email only

11 March 2024

Dear Nicola,

ELECTRICITY ACT 1989

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017. REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR BALGRAY WIND FARM.

Thank you for consulting the Ministry of Defence (MOD) in relation to the scoping opinion request for Balgray wind farm through your communication dated 16 February 2024.

The Defence Infrastructure Organisation (DIO) Safeguarding Team represents the MOD as a consultee in UK planning and energy consenting systems to ensure that development does not compromise or degrade the operation of defence sites such as aerodromes, explosives storage sites, air weapon ranges, and technical sites or training resources such as the Military Low Flying System.

I am writing to advise you that the MOD has concerns with the proposal.

The proposal concerns a development of 7 turbines with maximum blade tip heights of 230 metres above ground level. The proposed development has been assessed using the location data (Grid References) below provided in "Scoping Report" dated 22 December 2023.

Turbine no.	Easting	Northing
1	317323	587463
2	316495	587448
3	316441	587991
4	317138	587832

5	316148	588525
6	317032	588302
7	316645	588657

The principal safeguarding concerns of the MOD with respect to this development of wind turbines relates to the impact of the development on the Eskdalemuir Seismological Recording Station and the potential for turbines to form a physical obstruction to air traffic movements.

Eskdalemuir Seismological Recording Station

The development site identified falls within the statutory consultation zone associated with the seismological recording station at Eskdalemuir (the array), an asset that forms part of the UK contribution to the Comprehensive Nuclear Test Ban Treaty.

Research has confirmed that wind turbines of current design generate seismic noise which can interfere with the operational functionality of the array. In order to ensure the United Kingdom can continue to implement its obligations in maintaining the Comprehensive Nuclear Test Ban Treaty a finite seismic noise capacity for the 50km radius surrounding the array, based on the findings of research, is managed by the MOD.

At this time, there is no seismic noise capacity available. The MOD must, therefore, make you aware that we will likely object to proposals for wind energy development in this location due to the unacceptable impact the proposed wind energy development would have on the operation and capability of the array.

Physical Obstruction

In this case the development falls within Tactical Training Area 20 (TTA 20T), an area within which fixed wing aircraft may operate as low as 100 feet or 30.5 metres above ground level to conduct low level flight training. The addition of turbines in this location has the potential to introduce a physical obstruction to low flying aircraft operating in the area.

If the developer is able to overcome the issues stated above, to address the impact up on low flying given the location and scale of the development, the MOD would require that conditions are added to any consent issued requiring that the development is fitted with aviation safety lighting and that sufficient data is submitted to ensure that structures can be accurately charted to allow deconfliction.

Summary

The MOD has concerns with this proposal due to the potential impact it will have on the Eskdalemuir Seismological Recording Station and the potential to create a physical obstruction to air traffic movements.

The MOD must emphasise that the advice provided within this letter is in response to the information detailed in the developer's document titled "Scoping Report" dated 22 December 2023. Any variation of the parameters (which include the location, dimensions, form, and finishing materials) detailed may significantly alter how the development relates to MOD safeguarding requirements and cause adverse impacts to safeguarded defence assets or capabilities. In the event that any amendment, whether considered material or not by the determining authority, is submitted for approval, the MOD should be consulted and provided with adequate time to carry out assessments and provide a formal response.

I hope this adequately explains our position on the matter. If you require further information or would like to discuss this matter further, please do not hesitate to contact me.

Further information about the effects of wind turbines on MOD interests can be obtained from the following websites:

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

Yours sincerely

REDACTED

Teena Oulaghan
Safeguarding Manager

From: [Safe Guarding](#)
To: [Econsents Admin](#); [Nicola Ferguson](#)
Cc: [Safe Guarding](#)
Subject: ECU00005016 - Balgray Wind Farm
Date: 07 March 2024 07:55:18
Attachments: [image003.png](#)

Good morning,

In respect of the above, I can confirm the location of this development falls out with our Aerodrome Safeguarding zone for Edinburgh Airport therefore we have no objection/comment.

With best regards,
Claire

Claire Brown

Aerodrome Safeguarding & Compliance Officer



t: +44 (0)131 344 3845 m: 07771 842927
www.edinburghairport.com

Edinburgh Airport Limited
Room 3/54, 2nd Floor Terminal Building
EH12 9DN, Scotland

From: [Brian Davidson](#)
To: [Nicola Ferguson](#)
Cc: [Mary Colville \(Annan\)](#); [Jamie Ribbens](#)
Subject: RE: Request for Scoping Opinion Balgray Wind Farm
Date: 08 March 2024 10:46:53
Attachments: [image001.png](#)

Dear Nicola,

Thank you for your correspondence concerning the proposed Balgray Wind Farm.

Fisheries Management Scotland (FMS) represents the network of 40 Scottish District Salmon Fishery Boards (DSFBs) including the River Tweed Commission (RTC), who have a statutory responsibility to protect and improve salmon and sea trout fisheries and the 26 fishery trusts who provide a research, educational and monitoring role for all freshwater fish.

FMS act as a convenient central point for Scottish Government and developers to seek views on local developments. However, as we do not have the appropriate local knowledge, or the technical expertise to respond to specific projects, we are only able to provide a general response with regard to the potential risk of such developments to fish, their habitats and any dependent fisheries. Accordingly, our remit is confined mainly to alerting the relevant local DSFB/Trust to any proposal.

The proposed development falls within the district of the Annan District Salmon Fishery Board, and the catchment relating to the Galloway Fisheries Trust. It is important that the proposals are conducted in full consultation with these organisations (see link to FMS member DSFBs and Trusts below). We have also copied this response to these organisations.

Due to the potential for such developments to impact on migratory fish species and the fisheries they support, FMS have developed, in conjunction with Marine Scotland Science, advice for DSFBs and Trusts in dealing with planning applications. We would strongly recommend that these guidelines are fully considered throughout the planning, construction and monitoring phases of the proposed development.

- [LINK TO ADVICE ON TERRESTRIAL WINDFARMS](#)
- [LINK TO FMS MEMBER NETWORK CONTACT DETAILS](#)

Kind regards,

Brian

Brian Davidson | Dir Communications & Administration
Fisheries Management Scotland
11 Rutland Square, Edinburgh, EH1 2AS
Tel: 0131 221 6567 | 075844 84602
www.fms.scot

From: [Jamie Ribbens](#)
To: [Nicola Ferguson](#)
Subject: RE: Request for Scoping Opinion Balgray Wind Farm
Date: 24 March 2024 22:26:36
Attachments: [image003.png](#)
[image005.png](#)
[image006.png](#)

Dear Nicola

The Galloway Fisheries Trust (GFT) is a charitable organisation which was formed in 1988, by a number of neighboring District Salmon Fishery Boards in Dumfries and Galloway. The aim of the GFT is to undertake research, provide advice and complete practical works to protect and enhance aquatic biodiversity, particularly fish species, living in the freshwaters and river catchments across Dumfries and Galloway which includes the River Annan. GFT provide fisheries expertise and scientific advice to the Annan District Salmon Fishery Board (ADSFB). This consultation response is on behalf of the Annan DSFB. For further information on GFT see www.gallowayfisheriestrust.org

We wish to make the following specific comments / observations:

- We appreciate that Locogen Ltd contacted GFT early last year to discuss the proposed development site and any surveys we considered relevant to the site. After considering the site we proposed electrofishing and aquatic invertebrate surveys, which follows the Marine Directorate guidance titled 'Monitoring watercourses in relation to onshore wind farm developments: generic monitoring programme' (<https://www.gov.scot/publications/monitoring-watercourses-in-relation-to-onshore-wind-farm-developments-generic-monitoring-programme/>). This guidance states the need for fish surveys and aquatic invertebrates and provides guidance and minimum standards. Locogen agreed for these surveys to be undertaken.
- The proposed development site does cover a number of important fish supporting water courses. The Annan further downstream supports an important salmon and sea trout fishery. The river and its burns also support a range of protected fish species including Atlantic salmon, sea trout, European eels and Brook lampreys. In 2022 an eel ladder was fitted to a weir in the lower river which now allows eels to enter the catchment.
- The baseline fish survey can be used to highlight sensitivities that should be considered when designing roads, silt control methods, water quality monitoring points, water crossing designs, timing of works, etc. Importantly it will also inform the production of a 'Fish Monitoring Plan' which should cover pre, during and post construction phases.
- Any new water course crossing over the Hewke Burn must ensure fish access is protected. If instream works are planned in a watercourse supporting trout then such works should avoid taking place between October – May to protect spawning redds. Also a fish rescue by electrofishing should take place prior to instream works in fish supporting water courses.
- We would appreciate the opportunity to comment in due course on the proposed 'biodiversity net gain' work. We are very supportive of peatland restoration but would also request that opportunities to increase the resilience of water courses to climate change impacts is considered. This can include riparian tree planting, natural flood management etc. GFT would be keen to discuss possible opportunities with the developer.
- We are supportive of the commitment to employ suitable ECoW's and to produce a CEMP.
- It is good to see that it is planned to avoid any construction on the area of deepest peat. It is a concern though that a turbine is proposed very close to the deepest area of peat and there could be a risk that the hard standing / road could impact on the hydrology of the wider peatland?

The following have the potential to impact fish species and their habitats during windfarm developments. These general points/potential issues are of interest to us:

- Access track layout in relation to the proximity to sensitive fish habitat (e.g. spawning habitat);
- The number of watercourse crossings (new and upgraded);
- The location of new and upgraded watercourse crossings;

- New and upgraded watercourse crossing type, design, and structure, including information relating to the installation of each crossing point (e.g. maintaining the existing gradient, maintaining fish access at all water heights etc.);
- Construction information for new tracks (including layby locations), trackside drainage plans and designs especially in relation to increased run off rates;
- Turbine base locations;
- Turbine base excavation and associated run off from loose ground;
- Peat depth information in relation to water quality, peat slides or ground slips;
- Borrow pit locations;
- Changes to instream hydrological conditions and flush zones;
- Exacerbated erosion and/or elevated levels of suspended silt to watercourses during construction activities;
- Water quality monitoring information;
- Pollution to watercourses in the form of silt pollution;
- Pollution to watercourses in the form of chemical pollution;
- Reduction in quantity and quality of instream habitat;
- Adverse changes to instream morphology;
- Direct mortality of fish species;
- Mitigation measures to protect fish population and their habitats from the impact from all of the above;
- Timings of specific works such as new track building, new watercourse crossing installation, upgrading of existing watercourse crossings;
- Mitigation measures to protect watercourses, fish and their habitats – that which is built in to the design of the development and any additional mitigation measures which will be employed if required.

If you have any queries or would like clarification on any of the points raised above, please do not hesitate to contact me. Thank you once again for the addition time to submit a response.

Regards
Jamie

Jamie Ribbens BSc (Hons) MSc
Senior Fisheries Biologist

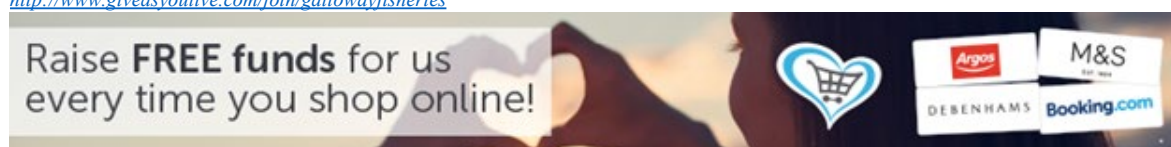
Galloway Fisheries Trust, Fisheries House, Station Industrial Estate, Newton Stewart, Wigtownshire, DG8 6ND
Tel: 01671 403011
A Scottish Registered Charity (No. SC 020751)

E: jamie@gallowayfisheriestrust.org W: www.gallowayfisheriestrust.org



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<http://www.giveasyoulive.com/join/gallowayfisheries>



From: [#GLA Safeguarding](#)
To: [Nicola Ferguson](#)
Subject: RE: Request for Scoping Opinion Balgray Wind Farm
Date: 05 March 2024 14:33:32
Attachments: [image001.png](#)
[image366706.png](#)
[image620043.png](#)
[image291503.png](#)
[image404210.png](#)
[image801722.png](#)
[image115919.png](#)

This proposal is located outwith our consultation area. As such we have no comment to make and need not be consulted further.

Kind regards
Kirsteen



#GLA Safeguarding
#GLA Safeguarding

☎ 07808 115 881
✉ glasafeguard@glasgowairport.com
🌐 www.glasgowairport.com

📍 Glasgow Airport, Erskine Court, St Andrews Drive, Paisley, PA3 2TJ



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From: [Ian Hutchinson](#)
To: [Nicola Ferguson](#)
Cc: [Safeguarding](#)
Subject: RE: External - Request for Scoping Opinion Balgray Wind Farm
Date: 21 February 2024 09:19:55
Attachments: [image001.png](#)

Hi Nicola,

On behalf of Glasgow Prestwick Airport, I have reviewed the documentation available on the ECU portal for Balgray Wind Farm (ECU00005016).

The proposed development benefits from a substantial amount of terrain shielding from the GPA Primary Surveillance Radar and VHF communications transmitters and is beyond the range of our published Instrument Flight Procedures. Therefore, we would have no comment or valid objection to make.

Kind regards,

Ian

Logo



Glasgow Prestwick Airport
Ltd.
Aviation House
Prestwick
KA9 2PL
Scotland
United Kingdom

Ian Hutchinson
Aerodrome Safeguarding Manager

T: (+44) 01292 511038
M:

ihutchinson@glasgowprestwick.com

www.glasgowprestwick.com

From: [Safeguarding](#)
To: [Nicola Ferguson](#)
Cc: [Safeguarding](#)
Subject: RE: Request for Scoping Opinion Balgray Wind Farm
Date: 07 March 2024 10:10:08
Attachments: [image001.png](#)

Your Ref: ECU00005016

Our Ref: 2024/040/DND

Dear Sir/Madam,

**Proposal: REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36
APPLICATION FOR BALGRAY WIND FARM**

This proposal is out-with HIAL's safeguarding criteria. Therefore, Highlands and Islands Airports Limited has no objections to the proposal.

Kind regards,

Nyree Millar-Bell
Aerodrome Safeguarding and Operations Support Officer
Highlands and Islands Airports Limited

From: [LUP enquiries](#)
To: [Nicola Ferguson](#)
Subject: Re: Request for Scoping Opinion Balgray Wind Farm
Date: 21 February 2024 15:08:13
Attachments: [Outlook-kq1q3bll.png](#)

Ms Ferguson,

Thank you for your consultation of 16th February 2024 sent to HSE's email address HazSubConsent.CEMHD5@hse.gov.uk regarding the request for a scoping opinion from the Scottish Ministers for the proposed section 36 application for the Balgray Wind Farm.

This is not a type of development that involves storing or processing hazardous substances as defined in the Planning (Hazardous Substances) Regulations therefore HSE does not have an interest from our role as statutory consultee for hazardous substances planning consent applications.

The development is not of a type where people (such as workers) would be based therefore HSE does not have an interest from our role as statutory consultee for specific developments proposed within land use planning consultation areas (zones) notified by HSE.

A check of our land use planning consultation zones shows the route is not within any explosive safeguarding zones.

However, there is a pipeline within the red line site boundary - 7933-2190 Lockerbie / Dumfries (Ref:M01) - operated by Scotland Gas Networks Ltd, upon looking at the scoping opinion report the locations of the wind turbines are not within the consultations zones of the pipeline, however you may wish to contact the pipeline operator to see if they have any comments.

Therefore, it appears that HSE's land use planning team does not have to be consulted.

Kind regards,
Berdine Clews

HSE's Land Use Planning Support Team
Chemicals, Explosives and Microbiological Division 5
HSE, Harpur Hill, Buxton, Derbyshire, SK17 9JN

Find out how HSE is Helping Great Britain work well

For HSE's Land Use Planning Advice Terms and Conditions, please click on the following link [HSE's Planning Advice Web App - Login \(hsl.gov.uk\)](#) and then click on 'terms and conditions'.

From: [JRC Windfarm Coordinations Old](#)
To: [Nicola Ferguson](#)
Cc: [Wind SSE](#)
Subject: Balgray Wind Farm - Request for Scoping Opinion [WF446832]
Date: 19 February 2024 11:50:47
Attachments: [image.png](#)

Dear nicola,

A Windfarms Team member has replied to your co-ordination request, reference **WF446832** with the following response:

If any details of this proposal change, particularly the disposition or scale of any turbine(s), this clearance will be void and re-evaluation of the proposal will be necessary.

*Please do not reply to this email - the responses are not monitored.
If you need us to investigate further, then please use the link at the end of this response or login to your account for access to your co-ordination requests and responses.*

Dear Sir/Madam,

Planning Ref:

ECU00005016

Name/Location:

BALGRAY WIND FARM

Site Centre/Turbine(s) at NGR:

Indicative:

Blade tip heights – 229m

Hub heights – 148m

Rotor diameter – 162m

Turbine	X	Y
1	317323	587463
2	316495	587448
3	316441	587991
4	317138	587832
5	316148	588525
6	317032	588302
7	316645	588657

BESS

Perimeter – 150m x 70 m

43MW capacity

Development Radius:

0.1Km

Hub Height: 148m Rotor Radius: 81m

This proposal is **cleared** with respect to radio link infrastructure operated by the local energy 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.

Registered in England & Wales: 2990041

[About The JRC | Joint Radio Company | JRC](#)

We maintain your personal contact details and are compliant with the Data Protection Act 2018 (DPA 2018) for the purpose of 'Legitimate Interest' for communication with you. If you would like to be removed, please contact anita.lad@jrc.co.uk.

We hope this response has sufficiently answered your query.

If not, please **do not send another email** as you will go back to the end of the mail queue, which is not what you or we need. Instead, **reply to this email by clicking on the link**

below or login to your account for access to your co-ordination requests and responses.

<https://breeze.jrc.co.uk/tickets/view.php?id=32574>

From: [.box.assetprotection](#)
To: [Nicola Ferguson](#)
Subject: RE: [EXTERNAL] Request for Scoping Opinion Balgray Wind Farm
Date: 23 February 2024 12:12:16
Attachments: [image001.png](#)

Good afternoon ,

Thank you for your email.

Regarding planning application Balgray Wind Farm , there are no National Grid Electricity Transmission assets affected in this area.

If you would like to view if there are any other affected assets in this area, please raise an enquiry with www.lsbud.co.uk. Additionally, if the location or works type changes, please raise an enquiry.

Please note this response is only in reference to **National Grid Electricity Transmission** assets only. National Grid Electricity Distribution (formerly WPD) and National Gas Transmission (formerly National Grid Gas) should be consulted separately where required.

Kindest regards,

Aimee Davis

Asset Protection Technical Assistant
Engineering Services
nationalgrid

National Grid House, Warwick Technology Park,
Gallows Hill, Warwick, CV34 6DA (Floor B1)

Please consider the environment before printing this email.

From: [NATS Safeguarding](#)
To: [Nicola Ferguson](#)
Cc: [Econsents Admin](#)
Subject: RE: Request for Scoping Opinion Balgray Wind Farm [SG36941]
Date: 28 February 2024 10:10:45
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[SG36941 Balgray Wind Farm - TOPA Issue 1.pdf](#)

Our Ref: SG36941

Dear Sir/Madam

We refer to the application above. The proposed development has been examined by our technical safeguarding teams and conflicts with our safeguarding criteria.

Accordingly, NATS (En Route) plc objects to the proposal. The reasons for NATS's objection are outlined in the attached report TOPA SG36941.

We would like to take this opportunity to draw your attention to the legal obligation of local authorities to consult NATS before granting planning permission. The obligation to consult arises in respect of certain applications that would affect a technical site operated by or on behalf of NATS (such sites being identified by safeguarding plans that are issued to local planning authorities).

In the event that any recommendations made by NATS are not accepted, local authorities are obliged to follow the relevant directions within Planning Circular 2 2003 - Scottish Planning Series: Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) (Scotland) Direction 2003 or Annex 1 - The Town And Country Planning (Safeguarded Aerodromes, Technical Sites And Military Explosives Storage Areas) Direction 2002.

These directions require that the planning authority notify both NATS and the Civil Aviation Authority ("CAA") of their intention. As this further notification is intended to allow the CAA to consider whether further scrutiny is required, the notification should be provided prior to any granting of permission.

It should also be noted that the failure to consult NATS, or to take into account NATS's comments when determining a planning application, could cause serious safety risks for air traffic.

Should you have any queries, please contact us using the details below.

Yours faithfully

NATS

NATS Safeguarding
E: natssafeguarding@nats.co.uk
4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk



Prepared by:
NATS Safeguarding Office



Technical and Operational Assessment (TOPA)

For Balgray Wind Farm Development

NATS ref: SG36941

Scottish Government ref: ECU00005016

Issue 1

Contents

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Publication History

Issue	Month/Year	Change Requests and summary
1	February 2024	Scoping Request

Document Use

External use: Yes

Referenced Documents

1. Background

1.1. En-route Consultation

NATS en-route plc is responsible for the safe and expeditious movement in the en-route phase of flight for aircraft operating in controlled airspace in the UK. To undertake this responsibility it has a comprehensive infrastructure of RADAR's, communication systems and navigational aids throughout the UK, all of which could be compromised by the establishment of a wind farm.

In this respect NATS is responsible for safeguarding this infrastructure to ensure its integrity to provide the required services to Air Traffic Control (ATC).

In order to discharge this responsibility NATS is a statutory consultee for all wind farm applications, and as such assesses the potential impact of every proposed development in the UK.

The technical assessment sections of this document define the assessments carried out against the development proposed in section 3.

2. Scope

This report provides NATS En-Route plc's view on the proposed application in respect of the impact upon its own operations and in respect of the application details contained within this report.

Where an impact is also anticipated on users of a shared asset (e.g. a NATS RADAR used by airports or other customers), additional relevant information may be included for information only. While an endeavour is made to give an insight in respect of any impact on other aviation stakeholders, it should be noted that this is outside of NATS' statutory obligations and that any engagement in respect of planning objections or mitigation should be had with the relevant stakeholder, although NATS as the asset owner may assist where possible.

3. Application Details

Scottish Government submitted a request for a NATS technical and operational assessment (TOPA) for the development at Balgray Wind Farm. It will comprise turbines as detailed in Table 1 and contained within an area as shown in the diagrams contained in Appendix B.

Turbine	Lat	Long	East	North	Tip Height (m)
1	55.1745	-3.2996	317323	587463	230
2	55.1743	-3.3126	316495	587448	230
3	55.1791	-3.3136	316441	587991	230
4	55.1778	-3.3027	317138	587832	230
5	55.1839	-3.3184	316148	588525	230
6	55.1820	-3.3045	317032	588302	230
7	55.1851	-3.3106	316645	588657	230

Table 1 – Turbine Details

4. Assessments Required

The proposed development falls within the assessment area of the following systems:

En-route Surv	Lat	Long	nm	km	Az (deg)	Type
Claxby Radar	53.4501	-0.3083	147.6	273.3	315.8	CMB
Clee Hill Radar	52.3983	-2.5975	168.7	312.4	351.7	CMB
Great Dun Fell Radar	54.6841	-2.4509	41.6	77.1	315.4	CMB
Lowther Hill Radar	55.3778	-3.7530	18.9	35.1	127.8	CMB
Perwinnes Radar	57.2123	-2.1309	128.1	237.3	198.4	CMB
Tiree Radar	56.4556	-6.9230	143.9	266.6	120.6	CMB
En-route Nav	Lat	Long	nm	km	Az (deg)	Type
None						
En-route AGA	Lat	Long	nm	km	Az (deg)	Type
None						

Table 2 – Impacted Infrastructure

4.1. En-route RADAR Technical Assessment

4.1.1. Predicted Impact on Lowther RADAR

Using the theory as described in Appendix A and development specific propagation profile it has been determined that the terrain screening available will not adequately attenuate the signal, and therefore this development is likely to cause false primary plots to be generated. A reduction in the RADAR's probability of detection, for real aircraft, is also anticipated.

4.1.2. En-route operational assessment of RADAR impact

Where an assessment reveals a technical impact on a specific NATS' RADAR, the users of that RADAR are consulted to ascertain whether the anticipated impact is acceptable to their operations or not.

Unit or role	Comment
Prestwick Centre ATC	Unacceptable
Military ATC	Acceptable

Note: The technical impact, as detailed above, has also been passed to non-NATS users of the affected RADAR, this may have included other planning consultees such as the MOD or other airports. Should these users consider the impact to be unacceptable it is expected that they will contact the planning authority directly to raise their concerns.

4.2. En-route Navigational Aid Assessment

4.2.1. Predicted Impact on Navigation Aids

No impact is anticipated on NATS' navigation aids.

4.3. En-route Radio Communication Assessment

4.3.1. Predicted Impact on the Radio Communications Infrastructure

No impact is anticipated on NATS' radio communications infrastructure.

5. Conclusions

5.1. En-route Consultation

The proposed development has been examined by technical and operational safeguarding teams. A technical impact is anticipated, this has been deemed to be unacceptable.

Appendix A – Background RADAR Theory

Primary RADAR False Plots

When RADAR transmits a pulse of energy with a power of P_t the power density, P , at a range of r is given by the equation:

$$P = \frac{G_t P_t}{4\pi r^2}$$

Where G_t is the gain of the RADAR's antenna in the direction in question.

If an object at this point in space has a RADAR cross section of σ , this can be treated as if the object re-radiates the pulse with a gain of σ and therefore the power density of the reflected signal at the RADAR is given by the equation:

$$P_a = \frac{\sigma P}{4\pi r^2} = \frac{\sigma G_t P_t}{(4\pi)^2 r^4}$$

The RADAR's ability to collect this power and feed it to its receiver is a function of its antenna's effective area, A_e , and is given by the equation:

$$P_r = P_a A_e = \frac{P_a G_r \lambda^2}{4\pi} = \frac{\sigma G_t G_r \lambda^2 P_t}{(4\pi)^3 r^4}$$

Where G_r is the RADAR antenna's receive gain in the direction of the object and λ is the RADAR's wavelength.

In a real world environment this equation must be augmented to include losses due to a variety of factors both internal to the RADAR system as well as external losses due to terrain and atmospheric absorption.

For simplicity these losses are generally combined in a single variable L

$$P_r = \frac{\sigma G_t G_r \lambda^2 P_t}{(4\pi)^3 r^4 L}$$

Secondary RADAR Reflections

When modelling the impact on SSR the probability that an indirect signal reflected from a wind turbine has the signal strength to be confused for a real interrogation or reply can be determined from a similar equation:

$$P_r = \frac{\sigma G_t G_r \lambda^2 P_t}{(4\pi)^3 r_t^2 r_r^2 L}$$

Where r_t and r_r are the range from RADAR-to-turbine and turbine-to-aircraft respectively. This equation can be rearranged to give the radius from the turbine within which an aircraft must be for reflections to become a problem.

$$r_r = \sqrt{\frac{\lambda^2}{(4\pi)^3}} \sqrt{\frac{\sigma G_t G_t P_t}{r_t^2 P_r L}}$$

Shadowing

When turbines lie directly between a RADAR and an aircraft not only do they have the potential to absorb or deflect, enough power such that the signal is of insufficient level to be detected on arrival.

It is also possible that azimuth determination, whether this done via sliding window or monopulse, can be distorted giving rise to inaccurate position reporting.

Terrain and Propagation Modelling

All terrain and propagation modelling is carried out by a software tool called ICS Telecom (version 11.1.7). All calculations of propagation losses are carried out with ICS Telecom configured to use the ITU-R 526 propagation model.

Appendix B – Diagrams

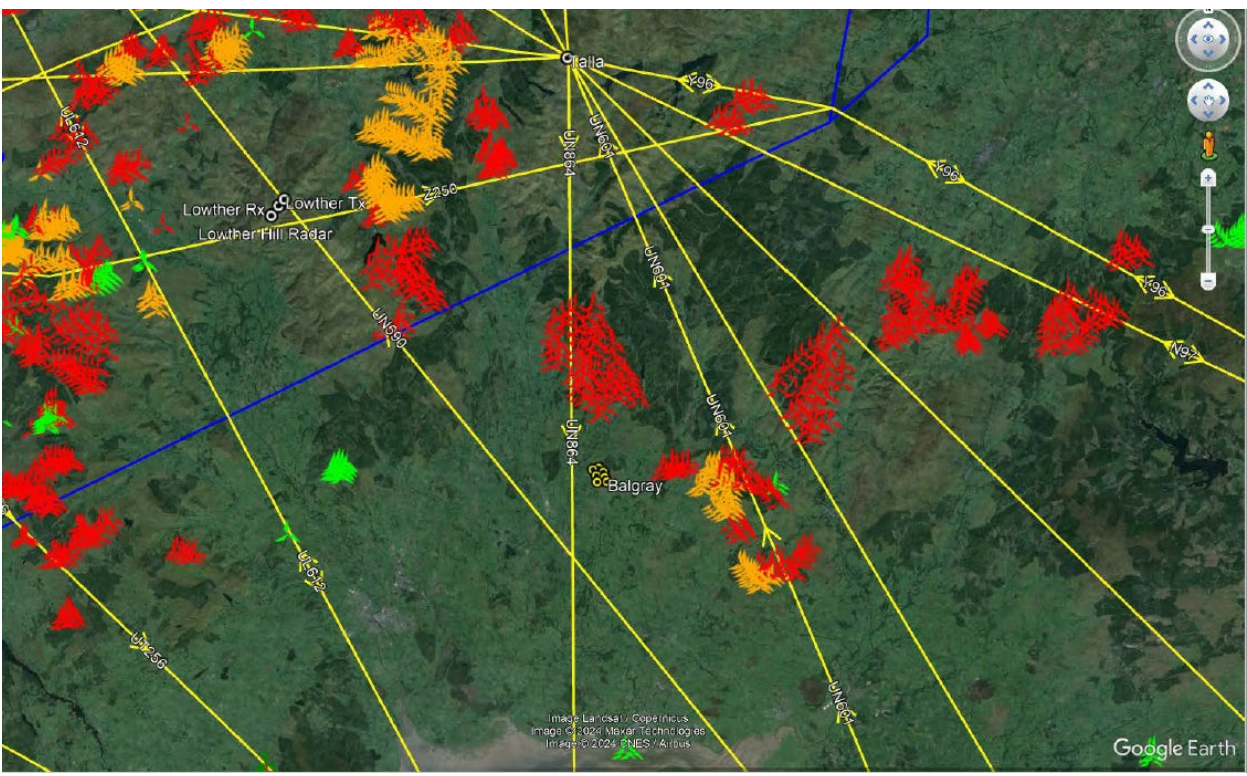


Figure 1: Proposed development location shown on an airways chart

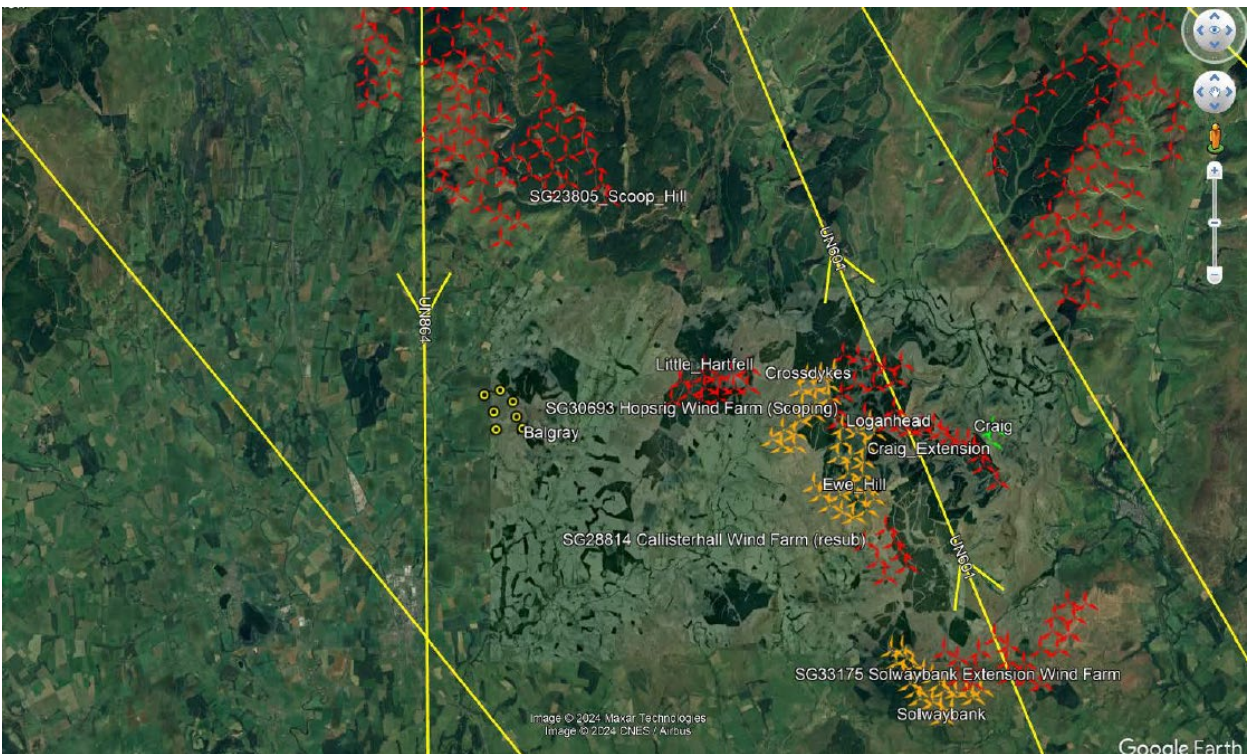


Figure 2: Proposed development shown alongside other recently assessed applications





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

Network Rail
Town Planning
151 St Vincent Street
Glasgow
G2 5NW

Martin Henderson
Town Planning Technician

Planning reference: ECU00005016
Case Officer: Nicola Ferguson

E-Mail:
TownPlanningScotland@networkrail.co.uk

Network Rail ref: 47 2024
22/02/2024

Dear Ms Ferguson,

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

Thank you for consulting Network Rail regarding the above development.

We would strongly suggest that reference to the issues below are included in the Scoping Opinion to ensure that potential impacts of both the construction and completed development on the current and future safe and efficient operation of the railway are assessed:

- A Traffic Assessment should be included to assess the effects of construction traffic on existing traffic flows and the public road network. Preferred construction traffic routes should be indicated. This will enable Network Rail to assess the possible impacts where/if the traffic crosses over/under our infrastructure and the suitability of these crossings.

Yours sincerely

REDACTED

Martin Henderson
Town Planning Technician

North Milk Community Council - March 2024

RESPONSE TO BALGRAY WIND FARM SCOPING REPORT

RESPONSES PERTINENT TO SECTION 18.1 OF THE SCOPING REPORT		
1.	Do consultees agree that the proposed scope of L&V assessment is appropriate?	In respect of assessing visual amenity NMCC makes the following comments:- It would be helpful if the assessment relating to residential properties actually involved discussion with the relevant households rather than assumptions being made about internal room layouts & usage together with how each property's gardens are used – desktop exercises are not able to fully appreciate this aspect (e.g. assumptions made that a kitchen will be at the rear of a property when this is not always the case/kitchen may be dual aspect, etc, etc)
2.	Do consultees agree with the need to assess impacts on Rhopalocera, namely Marsh Fritillary?	YES Part of the area has a population of marsh fritillary butterfly. This is a rare species, a Scottish Biodiversity Priority and a European protected species which was only thought to occur in the far west of Scotland and on some of the islands. As far as is known this population is the only one in the south of Scotland. The site has been seen by a few butterfly specialists as well to confirm the value of the site. The main breeding area is in Whitehill moss and would not be directly disturbed by turbines on the current layout. However, the population and particularly the habitat that it depends on could be sensitive to changes in water that feeds the moss. This comes down the slope from the Whitehill - Fir Tree Hill ridge along which tracks and turbines are planned. It may be that disturbance to this important area can be avoided but it needs to feature prominently in the planning. In addition, more of the site has value in supporting a whole range of plant and animals that are less common and should be conserved should the development proceed. One immediate risk is the turbine near Hallhills Loch. This is on a calcareous flushed slope with a number of uncommon or scarce plant species and the spring flushes here could be impacted by the engineering of tracks and turbine bases. The loch itself has water vole and also acts as a potential satellite site for the marsh fritillary (it has been seen there once). The biodiversity value could be sustained with a development of this nature but it would require careful planning and probably some relocation of at least one of the turbines. Subsequently the site would need to continue to be extensively grazed. There is a concern that the current uncertainty about the future management of the area has reduced grazing on the Balgray area and longer term this could allow the moss to become less suited to the butterflies and other plant and animals.
3.	Do the consultees agree with the assessment approach set out in the Hydrology, Geology and	<u>Private Water Supplies:</u> In respect of the presence of known private water supplies (to NMCCs knowledge at least x6 residential properties rely on PWS) which may be affected by the proposal the following comments are made:- NMCC considers that a risk assessment detailing the control measures to be taken to ensure the safety and security of this supply should be

	Hydrogeology section?	completed and this body of work should be pro-actively communicated to the relevant properties before the risk arises. <u>Flooding:</u> we assume that SEPA etc will request a flooding risk assessment however local knowledge is that Dryfe Water, particularly the length from near Hewke Mill to Sibbaldbie, floods when there is heavy rain and at this point in the river, various tributaries flow into from the hillsides upon which Balgray WF is proposed therefore NMCC would welcome flood mitigation measures to be covered in the EIA including how those mitigation measures will be proactively communicated to the affected properties.
4.	Agreement with the proposed noise method of assessment?	ETSU-R-97 Guidance appears to be the standard industry benchmarking guidance wrt noise generated by wind turbines. Please confirm what the candidate turbine is for this aspect.
5.	Do the consultees agree with the assessment approach set out in the shadow flicker section?	The risk assessment on this aspect should include the residential properties which may be affected together with shadow flicker's potential impact for road users in the vicinity of the proposed wind farm.
ADDITIONAL COMMENTS		
6.	Feedback from NMCC residents	Whilst accepting that this is a Scoping Consultation rather than a Planning Application, NMCC has received no comments in favour of this proposal but <i>has</i> received comments that the proposal is not wanted for reasons such as:- cumulative impact given the many wind farms both operational & proposed in this immediate area; impact on local roads not designed to carry such heavy loads as turbine components; visual impacts; impact on birds especially red kites, falcons and golden eagles in the area.
7.	Pre-construction and construction phase aspects for inclusion within the EIA	a. Environmental impact study covering the commissioning and lifetime operations of the proposed wind farm; b. wrt the proposed battery storage:- where is the battery storage being manufactured/assembled; Fire Risk Assessment, impact study and emergency response requirements for the battery storage; c. Percentage of actual local content of works within the supply chain as anything sourced out with Dumfries & Galloway could not properly be described as "local content"; d. wrt local jobs :- what exactly the intent here is during preconstruction, construction, commissioning and operations and maintenance through the lifetime of the wind farm; e. Comprehensive impact assessment document detailing delays and disruption impacts upon surrounding community during the pre- and construction phases; f. Who are the OEMs of the proposed turbines; g. Where are the monopolies being manufactured; h. Where are the OEMs manufacturing the turbine blades and what are the anticipated blade disposal methods at the end of the wind farm's operating life; i. Where are the nacelles and generators being manufactured?

8.	Previous wind farm application/Newfield Wind Farm	A previous planning application (Newfield Wind Farm) which incorporated some of the land covered by the Balgray Wind Farm proposal was refused consent 10 years ago. Accepting that the Newfield Wind Farm proposal covered a larger area and utilised more turbines (which were all significantly shorter than the proposed Balgray WF turbines), NMCC would like to see information presented in an easily digestible way (e.g. table format) which addresses how the Balgray WF proposal overcomes/mitigates the reasons for the refusal of the Newfield WF.
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From: [ONR Land Use Planning](#)
To: [Econsents Admin](#)
Subject: ONR Land Use Planning - Application ECU00005016
Date: 21 February 2024 12:51:39
Attachments: [image001.png](#)
[image001.png](#)

Dear Sir/Madam,

With regard to planning application ECU00005016, ONR makes no comment on this proposed development as it does not lie within a consultation zone around a GB nuclear site.

You can find information concerning our Land Use Planning consultation process here: (<http://www.onr.org.uk/land-use-planning.htm>).

Kind regards,

Vicki Enston
Land Use Planning
Office for Nuclear Regulation
ONR-Land.Use-planning@onr.gov.uk

From: [Doug Howieson](#)
To: [Nicola Ferguson](#)
Subject: FW: Request for Scoping Opinion Balgray Wind Farm
Date: 25 March 2024 16:18:24
Attachments: [image001.png](#)

From: Doug Howieson <Doug.Howieson@forestry.gov.scot>
Sent: Monday, March 25, 2024 3:59 PM
To: <mailto:Nicola.Ferguson@gov.scot>
Subject: FW: Request for Scoping Opinion Balgray Wind Farm

Hi Nicola.

Thanks for the opportunity to comment on this.

The development does not appear to present any impact upon Forestry so I have no comment to make.

Kind Regards

Doug

Tuesday, 20 February 2024



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

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

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



Dear Customer,

Balgray Wind Farm, Boreland, Dumfries & Galloway, DG11 2LL
Planning Ref: ECU00005016
Our Ref: DSCAS-0103969-GMB
Proposal: Proposed wind farm of up to 7 no Turbines, maximum tip height 230m and battery storage of approximately 50 MW.

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. Please read the following carefully as there may be further action required. Scottish Water 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.

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,

Ruth Kerr.

Development Services Analyst

PlanningConsultations@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."



The Coal
Authority

A54

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

T: 01623 637 119 (Planning Enquiries)

E: planningconsultation@coal.gov.uk

W: www.gov.uk/coalauthority

For the attention of: Nicola Ferguson

Dumfries & Galloway Council

[By email: Nicola.Ferguson@gov.scot]

19 February 2024

Dear Nicola Ferguson

Re: ECU00005016 Balgray Wind Farm

Proposed wind farm of up to 7 no Turbines, maximum tip height 230m and battery storage of approximately 50 MW.; BALGRAY, WIND FARM

Thank you for your notification of 16 February 2024 seeking the views of the Coal Authority on the above.

The Coal Authority is a non-departmental public body sponsored by the Department for Energy Security and Net Zero. As a statutory consultee, the Coal Authority has a duty to respond to planning applications and development plans in order to protect the public and the environment in mining areas.

The site to which this submission relates is not located within the defined coalfield. On this basis we have no specific comment to make.

Yours

The Coal Authority Planning Team

From: [Tim Allott](#) on behalf of [metofficesafeguarding](#)
To: [Nicola Ferguson](#)
Subject: RE: Request for Scoping Opinion Balgray Wind Farm
Date: 21 February 2024 09:39:05
Attachments: [image001.png](#)

Dear Nicola,

Thanks for contacting the Met Office. The proposed development is beyond the 20 km radius consultation zone of any Met Office radar and the impact on services such as weather forecasts and warnings derived from the radar data will be limited. Therefore we have no comments on the proposal and do not need to be consulted further.

Kind regards,

Tim Allott

Upper Air Observations

Met Office, FitzRoy Road, Exeter, Devon, EX1 3PB, United Kingdom

E-mail: metofficesafeguarding@metoffice.gov.uk

Web: <https://www.metoffice.gov.uk/services/business-industry/energy/safeguarding>

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

Your ref:
ECU00005016

Our ref:
GB01T19K05

Date:
06/03/2024

econsents_admin@gov.scot

Dear Sirs,

ELECTRICITY ACT 1989

THE ELECTRICITY (APPLICATIONS FOR CONSENT) REGULATIONS 2017

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR BALGRAY WIND FARM, DUMFRIES & GALLOWAY

With reference to your recent correspondence on the above development, we acknowledge receipt of the Scoping Report prepared by Locogen Consulting Ltd in support of the above development.

This information has been reviewed and based on the review undertaken, Transport Scotland would provide the following comments.

Proposed Development

The proposed Balgray Wind Farm comprises seven wind turbines with a maximum blade tip height of 230m and a battery energy storage system (BESS) facility of approximately 43MW capacity. The site is located approximately 6km northeast of Lockerbie, with the nearest trunk road being the A74(M) at Lockerbie.

Assessment of Environmental Impacts

Chapter 13 of the SR presents the proposed assessment of the impacts of Traffic and Transport. This states that the Guidelines for the Environmental Assessment of Traffic and Movement (IEMA, 2023) will be used to inform the assessment. Transport Scotland is satisfied with this approach.

We note that the study area for the assessment will include the A74(M), in addition to local roads. This is considered appropriate. It is also noted that base traffic for the A74(M) will be extracted from publicly available traffic count data. Transport Scotland would add that a source of traffic data is Traffic Scotland's National Traffic Data System, where current traffic data should be utilised where possible. In addition, it should be noted that base traffic data will require to be factored to the construction year flows, using National Road Traffic Forecasts (NRTF) Low Growth.

It is noted that any impacts associated with the operational and decommissioning phases of the development are to be scoped out of the Environmental Impact Assessment Report (EIAR). We would consider this to be acceptable in this instance.

With regard to accident data, we note it is proposed to use Crashmap to obtain accident statistics. We would state that more up to date statistics can be obtained directly from Transport Scotland for the trunk road network. Contact accidentdatarequests@transport.gov.scot

Abnormal Loads Assessment

No mention is made within the SR of an Abnormal Loads Assessment. It should be noted that Transport Scotland will require to be satisfied that the size of turbines proposed can negotiate the selected route and that their transportation will not have any detrimental effect on structures within the trunk road route path.

A full Abnormal Loads Assessment report should be provided with the EIAR that identifies key pinch points on the trunk road network. Swept path analysis should be undertaken and details provided with regard to any required changes to street furniture or structures along the route.

We would also state that any proposed changes to the trunk road network must be discussed and approved (via a technical approval process) by the appropriate Area Managers.

I trust that the above is satisfactory and should you wish to discuss any issues raised in greater detail, please do not hesitate to contact me at the number above.

Yours faithfully

REDACTED

Iain Clement

**Transport Scotland
Roads Directorate**

Marine Directorate – Science Evidence Data and Digital (MD-SEDD) advice on freshwater and diadromous fish and fisheries in relation to onshore wind farm developments.

July 2020 updated September 2023

Marine Directorate – Science Evidence Data and Digital (MD-SEDD) provides internal, non-statutory, advice in relation to freshwater and diadromous fish and fisheries to the Scottish Government's Energy Consents Unit (ECU) for onshore wind farm developments in Scotland.

Atlantic salmon (*Salmo salar*), sea trout and brown trout (*Salmo trutta*) are of high economic value and conservation interest in Scotland and for which MD-SEDD has in-house expertise. Onshore wind farms are often located in upland areas where salmon and trout spawning and rearing grounds may also be found. MD-SEDD aims, through our provision of advice to ECU, to ensure that the construction and operation of these onshore developments do not have a detrimental impact on the freshwater life stages of these fish populations.

The Electricity Works (Environmental Impact Assessment) (EIA) (Scotland) Regulations (2017) state that the EIA must assess the direct and indirect significant effects of the proposed development on water and biodiversity, and in particular species (such as Atlantic salmon) and habitats protected under the EU Habitats Directive. Salmon and trout are listed as priority species of high conservation interest in the Scottish Biodiversity Index and support valuable recreational fisheries.

A good working relationship has been developed over the years between ECU and MD-SEDD, which ensures that these fish species are considered by ECU during all stages of the application process of onshore wind farm developments and are similarly considered during the construction and operation of future onshore wind farms. It is important that matters relating to freshwater and diadromous fish and fisheries, particularly salmon and trout, continue to be considered during the construction and operation of future onshore wind farms.

In the current document, MD-SEDD sets out a revised, more efficient approach to the provision of our advice, which utilises our generic scoping and monitoring programme guidelines (<https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/onshoreren>). This standing advice provides regulators (e.g. ECU, local planning authorities), developers and consultants with the information required at all stages of the application process for onshore wind farm developments, such that matters relating to freshwater and diadromous fish and fisheries are addressed in the same rigorous manner as is currently being carried out and continue to be fully in line with EIA regulations. At the request of ECU, MD-SEDD will still be able to provide further and/or bespoke advice relevant to freshwater and diadromous fish and fisheries e.g. site specific advice, at any stage of the application process for a proposed development, particularly where a development may be considered sensitive or contentious in nature.

MD-SEDD will continue undertaking research, identifying additional research requirements, and keep up to date with the latest published knowledge relating to the

impacts of onshore wind farms on freshwater and diadromous fish populations. This will be used to ensure that our guidelines and standing advice are based on the best available evidence and also to continue the publication of the relevant findings and knowledge to all stakeholders including regulators, developers and consultants.

MD-SEDD provision of advice to ECU

- MD-SEDD should not be asked for advice on pre application and application consultations (including screening, scoping, gate checks and EIA applications). Instead, the MD-SEDD scoping guidelines and standing advice (outlined below) should be provided to the developer as they set out what information should be included in the EIA report;
- if new issues arise which are not dealt with in our guidance or in our previous responses relating to respective developments, MD-SEDD can be asked to provide advice in relation to proposed mitigation measures and monitoring programmes which should be outlined in the EIA Report (further details below);
- if new issues arise which are not dealt with in our guidance or in our previous responses, MD-SEDD can be asked to provide advice on suitable wording, within a planning condition, to secure proposed monitoring programmes, should the development be granted consent;
- MD-SEDD cannot provide advice to developers or consultants, our advice is to ECU and/or other regulatory bodies.
- if ECU has identified specific issues during any part of the application process that the standing advice does not address, MD-SEDD should be contacted.

MD-SEDD Standing Advice for each stage of the EIA process

Scoping

MD-SEDD issued generic scoping guidelines

(<https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/onshoreren>) which outline how fish populations can be impacted during the construction, operation and decommissioning of a wind farm development and informs developers as to what should be considered, in relation to freshwater and diadromous fish and fisheries, during the EIA process.

In addition to identifying the main watercourses and waterbodies within and downstream of the proposed development area, developers should identify and consider, at this early stage, any areas of Special Areas of Conservation where fish are a qualifying feature and proposed felling operations particularly in acid sensitive areas.

If a developer identifies new issues or has a technical query in respect of MD-SEDD generic scoping guidelines then ECU should be informed who will then co-ordinate a response from MD-SEDD.

Gate check

The detail within the generic scoping guidelines already provides sufficient information relating to water quality and salmon and trout populations for developers at this stage of the application.

Developers will be required to provide a gate check checklist (annex 1) in advance of their application submission which should signpost ECU to where all matters relevant to freshwater and diadromous fish and fisheries have been presented in the EIA report. Where matters have not been addressed or a different approach, to that specified in the advice, has been adopted the developer will be required to set out why.

EIA Report

MD-SEDD will focus on those developments which may be more sensitive and/or where there are known existing pressures on fish populations (<https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/fishreform/licence/status/Pressures>). The generic scoping guidelines should ensure that the developer has addressed all matters relevant to freshwater and diadromous fish and fisheries and presented them in the appropriate chapters of the EIA report. Use of the gate check checklist should ensure that the EIA report contains the required information; the absence of such information may necessitate requesting additional information which may delay the process:

Developers should specifically discuss and assess potential impacts and appropriate mitigation measures associated with the following:

- any designated area, for which fish is a qualifying feature, within and/or downstream of the proposed development area;
- the presence of a large density of watercourses;
- the presence of large areas of deep peat deposits;
- known acidification problems and/or other existing pressures on fish populations in the area; and
- proposed felling operations.

Post-Consent Monitoring

MD-SEDD recommends that a water quality and fish population monitoring programme is carried out to ensure that the proposed mitigation measures are effective. A robust, strategically designed and site specific monitoring programme conducted before, during and after construction can help to identify any changes, should they occur, and assist in implementing rapid remediation before long term ecological impacts occur.

MD-SEDD has published guidance on survey/monitoring programmes associated with onshore wind farm developments (<https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/onshoreren>) which developers should follow when drawing up survey and/or monitoring programmes.

If a developer considers that such a monitoring programme is not required then a clear justification should be provided.

Planning Conditions

MD-SEDD advises that planning conditions are drawn up to ensure appropriate provision for mitigation measures and monitoring programmes, should the development be given consent. We recommend, where required, that a Water Quality Monitoring Programme, Fisheries Monitoring Programme and the appointment of an Ecological Clerk of Works, specifically in overseeing the above monitoring programmes, is outlined within these conditions and that MD-SEDD is consulted on these programmes.

Wording suggested by MD-SEDD in relation to water quality, fish populations and fisheries for incorporation into planning consents:

1. No development shall commence unless a Water Quality and Fish Monitoring Plan (WQFMP) has been submitted to and approved in writing by the Planning Authority in consultation with Marine Directorate – Science Evidence Data and Digital (MD–SEDD) and any such other advisors or organisations.
2. The WQFMP must take account of the Scottish Government’s MD-SEDD guidelines and standing advice and shall include:
 - a. water quality sampling should be carried out at least 12 months prior to construction commencing, during construction and for at least 12 months after construction is complete. The water quality monitoring plan should include key hydrochemical parameters, turbidity, and flow data, the identification of sampling locations (including control sites), frequency of sampling, sampling methodology, data analysis and reporting etc.;
 - b. the fish monitoring plan should include fully quantitative electrofishing surveys at sites potentially impacted and at control sites for at least 12 months before construction commences, during construction and for at least 12 months after construction is completed to detect any changes in fish populations; and
 - c. appropriate site specific mitigation measures detailed in the Environmental Impact Assessment and in agreement with the Planning Authority and MD-SEDD.
3. Thereafter, the WQFMP shall be implemented within the timescales set out to the satisfaction of the Planning Authority in consultation with MD- SEDD and the results of such monitoring shall be submitted to the Planning Authority on a 6 monthly basis or on request.

Reason: To ensure no deterioration of water quality and to protect fish populations within and downstream of the development area.

Sources of further information

NatureScot (previously “SNH”) guidance on wind farm developments -

<https://www.nature.scot/professional-advice/planning-and-development/advice-planners-and-developers/renewable-energy-development/onshore-wind-energy/advice-wind-farm>

Scottish Environment Protection Agency (SEPA) guidance on wind farm developments –

<https://www.sepa.org.uk/environment/energy/renewable/#wind>

A joint publication by Scottish Renewables, NatureScot, SEPA, Forestry Commission Scotland, Historic Environment Scotland, Marine Scotland Science (now MD-SEDD) and Association of Environmental and Ecological Clerks of Works (2019) Good Practice during Wind Farm Construction -

<https://www.nature.scot/guidance-good-practice-during-wind-farm-construction>.

Annex 1 (revised September 2023)

Marine Directorate – Science Evidence Data and Digital (MD-SEDD) – EIA Checklist

The generic scoping guidelines should ensure that all matters relevant to freshwater and diadromous fish and fisheries have been addressed and presented in the appropriate chapters of the EIA report. Use of the checklist below should ensure that the EIA report contains the following information; the absence of such information ***may necessitate requesting additional information*** which could delay the process:

MD-SEDD Standard EIA Report Requirements	Provided in application YES/NO	If YES – please signpost to relevant chapter of EIA Report	If not provided or provided different to MD-SEDD advice, please set out reasons.
1. A map outlining the proposed development area and the proposed location of: ○ the turbines, ○ associated crane hard standing areas, ○ borrow pits, ○ permanent meteorological masts, ○ access tracks including watercourse crossings, ○ all buildings including substation, battery storage; ○ permanent and temporary construction compounds; ○ all watercourses; and ○ contour lines;			

2. A description and results of the site characterisation surveys for fish (including fully quantitative electrofishing surveys) and water quality including the location of the electrofishing and fish habitat survey sites and water quality sampling sites on the map outlining the proposed turbines and associated infrastructure. This should be carried out where a Special Area of Conservation (SAC) is present and where salmon are a qualifying feature, and in exceptional cases when required in the scoping advice for other reasons. In other cases, developers can assume that fish populations are present;			
3. An outline of the potential impacts on fish populations and water quality within and downstream of the proposed development area;			
4. Any potential cumulative impacts on the water quality and fish populations associated with adjacent (operational and consented) developments including wind farms, hydro schemes, aquaculture and mining;			

5. Any proposed site specific mitigation measures as outlined in MD-SEDD generic scoping guidelines and the joint publication “Good Practice during Wind Farm Construction” (https://www.nature.scot/guidance-good-practice-during-wind-farm-construction);			
6. Full details of proposed monitoring programmes using guidelines issued by MD-SEDD and accompanied by a map outlining the proposed sampling and control sites in addition to the location of all turbines and associated infrastructure. At least 12 months of baseline pre-construction data should be included. The monitoring programme can be secured using suitable wording in a condition.			
7. A decommissioning and restoration plan outlining proposed mitigation/monitoring for water quality and fish populations. This can be secured using suitable wording in a condition.			

Developers should specifically discuss and assess potential impacts and appropriate mitigation measures associated with the following:	Provided in application YES/NO	If YES – please signpost to relevant chapter of EIA Report	If not provided or provided different to MD-SEDD advice, please set out reasons.
1. Any designated area (e.g. SAC), for which fish is a qualifying feature, within and/or downstream of the proposed development area;			
2. The presence of a large density of watercourses;			
3. The presence of large areas of deep peat deposits;			
4. Known acidification problems and/or other existing pressures on fish populations in the area; and			
5. Proposed felling operations.			