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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**

**Appin Wind Farm
Statkraft UK Limited**

June 2022

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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 Statkraft UK Limited a company incorporated under the Companies Acts with company number 05742795 and having its registered office at 19th Floor 22 Bishopsgate, London, United Kingdom, EC2N 4BQ (“the Company”) in response to a request dated 21 March 2022 for a scoping opinion under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 in relation to the proposed Appin Wind Farm (“the proposed development”). The request was accompanied by a scoping report which was prepared by Land Use Consultants Ltd, acting as the Company’s agent.
- 1.2** The proposed development would be located approximately 12.5km to the west of Thornhill within Dumfries and Galloway. The A702 passes within approximately 7km of the site to the south-east between Thornhill and St John’s Town of Dalry; the A76 runs along the more populous Nithsdale, approximately 12km to the north-east of the site.
- 1.3** The proposed development will consist of up to 25 turbines with a maximum height to blade tip of 230m and rotor diameters of approximately 80m. Maximum generating capacity will be in excess of 50 MW.
- 1.4** In addition to the 25 Wind Turbines there will be ancillary infrastructure including:
- Permanent foundations supporting each wind turbine;
 - Associated crane hardstanding at each turbine location;
 - A network of onsite access tracks and associated watercourse crossings;
 - A network of underground cables to connect the turbines to the onsite substation;
 - A control building and substation compound;
 - A permanent anemometer mast or LiDAR compound for wind monitoring, including associated foundations and hardstanding;
 - Temporary construction compound(s), laydown area(s) and a car park;
 - Temporary borrow pits;
 - Energy storage systems, if included, designed to complement renewable energy generation.
- 1.5** The Company indicates the proposed development would be decommissioned after 50 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 submitted Eucharhead development (21 turbines up to 230m to tip height) lies immediately adjacent to the western boundary of the site. Approximately 1km to the west of the site Lorg wind farm (12 turbines up to 200m to tip height) is currently at scoping stage. Approximately 2km to the north of the site boundary, the submitted Sanquhar II development (44 turbines up to 200m to tip height) is located in the upland area between the Shinnel Water Valley and the Scaur Water Valley.

2. Consultation

- 2.1 Following the scoping opinion request a list of consultees was agreed between Statkraft UK Limited and the Energy Consents Unit. A consultation on the scoping report was undertaken by the Scottish Ministers and this commenced on 25 March 2022. The consultation closed on 19 April 2022.

Extensions to this deadline were granted to

- Crown Estate Scotland
- Defence Infrastructure Organisation
- Glasgow Prestwick Airport
- Historic Environment Scotland
- Planning Authority – Dumfries and Galloway Council
- Scottish Rights of Way and Access Society (ScotWays)
- Tyron Community Council

The Scottish Ministers also requested responses from their internal advisors Transport Scotland and Scottish Forestry. Standing advice from Marine Scotland Science (MSS) 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 MSS, are attached in **ANNEX A Consultation responses**.

- 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 MSS, 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 No responses were received from:
- Carsphairn Community Council
 - Civil Aviation Authority Airspace
 - Glasgow Airport
 - Glencairn Community Council
 - John Muir Trust

- Kier Community Council
- Mountaineering Scotland
- Nuclear Safety Directorate
- Penpont Community Council
- Scottish Wild Land Group
- Scottish Wildlife 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 and Historic Environment Scotland, 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 dated 21 March 2022 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 at Chapter 2 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 grid technologies including battery storage and/or solar panels. 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, solar panels, battery storage)
- components required for each generating station
- export capacity of megawatts and megawatt hours of electricity for battery storage and/or solar

3.8 Landscape, visual and night-time assessment;

As the maximum blade tip height of turbines exceeds 150m the LVIA, as detailed in section 4 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.

The scoping report identified viewpoints at Table 4.2 to be assessed within the landscape and visual impact assessment.

It is recommended by the Scottish Ministers that the study area in kilometres from the outer most turbines of the proposed development and the final list of viewpoints and visualisations, including those for Night Time Assessment, should be agreed following discussion between the Company, Dumfries and Galloway Council and NatureScot.

Full details of all mitigation of aviation lighting impacts subsequently identified should be provided in the EIA report.

3.9 Cumulative Landscape Impact Assessment;

To ensure that assessments are as up-to-date as possible, developments to be included in cumulative landscape impact assessments should be discussed and agreed by the Company and Dumfries & Galloway Council. Photography and visualisations submitted in the EIA report should reflect the most up-to-date cumulative position and the most up-to-date ecological and vegetation position.

3.10 Bird Surveys;

It is recommended by the Scottish Ministers that decisions on bird surveys – species, methodology, vantage points, view sheds & duration – site specifics & cumulative – should be made following discussion between the Company and NatureScot.

3.11 Borrow Pits;

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*'.

3.12 Water Supply;

Scottish Water provided information confirming that the proposed activity falls partly within a drinking water catchment where a Scottish Water abstraction is located. Scottish Water abstractions are designated as Drinking Water Protected Areas (DWPA) under Article 7 of the Water Framework Directive. The Company should include details in the EIA report of any relevant mitigation measures to be provided.

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.

3.13 MSS;

MSS 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.

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.

MSS 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.

3.14 Baseline Fish Survey;

The Scottish Ministers recommend that the Company discuss and agree Baseline Fish Surveys with the local District Salmon Fishery Board and Fisheries Trust.

3.15 Landscape Designations;

Although the site of the proposed development lies out with any sites designated for their nature conservation importance, the Scottish Ministers recommend that the Company contact NatureScot and Dumfries & Galloway Council to discuss and agree designated sites to be included in the EIAR and the survey work and further in-depth modelling and research to be undertaken.

3.16 Peat Landslide Hazard and Risk Assessment;

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.

It should be noted by the Company that the Scottish Ministers engage the services of appropriate specialists to assess Peat Landslide Hazard and Risk Assessments submitted with an EIA report.

3.17 Noise;

It is recommended by the Scottish Ministers that the final list of receptors in respect of noise assessment should be agreed following discussion between the Company and Dumfries & Galloway Council.

The noise assessment should be carried out in line with relevant legislation and standards as detailed in chapter 9 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."

3.18 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** Applicants are reminded that there will be limited opportunity to materially vary the form and content of the proposed development once an application is submitted.
- 5.7** 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.

5.8 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). In addition, a separate disc containing the EIA report and its associated documentation in electronic format will be required.

Victoria Bonner
Energy Consents Unit
June 2022

ANNEX A

Consultation

List of consultees

• Dumfries and Galloway Council	A1-A24
• Historic Environment Scotland	A25-A28
• NatureScot	A29-A32
• SEPA	A33-A40
• BT	A41-A42
• Carsphairn Community Council*	
• Civil Aviation Authority – Airspace*	
• Closeburn Community Council	A43
• Crown Estate Scotland	A44
• Defence Infrastructure Organisation (Wind)	A45-A46
• East Ayrshire Council	A47-A48
• Edinburgh Airport	A49
• Fisheries Management Scotland	A50
• Fisheries – Nith Catchment Fisheries Trust	A51
• Fisheries – Nith District Salmon Fisheries	A52-A53
• Glasgow Airport*	
• Glasgow Prestwick Airport	A54-A58
• Glencairn Community Council*	
• John Muir Trust*	
• Joint Radio Company	A59-A60
• Kier Community Council*	
• Mountaineering Scotland*	
• NATS Safeguarding	A62-A73
• Nuclear Safety Directorate*	
• Penpont Community Council*	
• RSPB Scotland	A74
• Scottish Borders Council	A75
• Scottish Forestry	A76-A78
• Scottish Rights of Way and Access Society (ScotWays)	A79-A83
• Scottish Water	A84-A86
• Scottish Wild Land Group (SWLG) *	
• Scottish Wildlife Trust *	
• South Ayrshire Council	A87
• South Lanarkshire Council	A88-A89
• Transport Scotland	A90-A92
• Tyron Community Council	A93-A102
• Visit Scotland	A103-A104

*No response was received.

Internal advice from areas of the Scottish Government was provided by officials from Transport Scotland, Scottish Forestry and Marine Scotland included at **Annex B**.

Proposal: REQUEST FOR SCOPING OPINION UNDER ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 2017 FOR ERECTION OF 25 WIND TURBINES (MAXIMUM TIP HEIGHT 230 METRES) AND ASSOCIATED WORKS

Location: Appin Wind Farm, Thornhill, Dumfries

Application Type: Scoping Opinion

Ref. No.: 21/1333/SCO

1. This scoping request from the Scottish Government Energy Consents Unit relates to a proposal to construct and operate a wind farm on land located approximately 12.5 kilometres to the west of the town of Thornhill, Dumfries and Galloway. The applicant, Land Use Consultants (on behalf of Statkraft UK Ltd), seeks consent for the erection of up to 25 wind turbines up to 230 metres to tip height. In addition to this, the applicant seeks consent for formation of permanent foundations, associated crane hardstandings, onsite track network, underground cabling, erection of onsite substation and control building, permanent anemometer mast or LiDAR compound, temporary works including car park, laydown area, borrow pits and other associated works. The application site lies within the Dumfries and Galloway Council area, and as the expected output of the wind farm will be up to 50 MW, the proposed works will be determined by Dumfries and Galloway Council as local Planning Authority.

2. The Planning Service consulted the following Departments of Dumfries and Galloway Council: Council Roads Officer, Flood Risk Management Team, Environmental Health Officer, Landscape Architect and Access Officer. In addition to this, the following statutory consultees were consulted: SEPA, Scottish Natural Heritage (NatureScot), NATS and Scottish Water. In addition, the RSPB were also consulted.

To date responses have been received from the following:

3 Council Access Officer

3.1 I can confirm that the proposed site is affected by a Core Path recorded in the Dumfries and Galloway Core Paths Plan. Core Path 51, as shown on the attached plan, follows part of the access track to the Northeast of the application boundary. The site is not affected by any other recorded Core Paths or Rights of Way.

[This plan is attached to this response as **Appendix I**]

4 Flood Risk Management Team

4.1 With reference to planning application 22/0525/SCO, the Flood Risk Management Team (FRMT) have no objection after reviewing the information provided and held, however would advise the following:

- Developer needs to manage surface runoff from the site during and after construction. Runoff should mimic that of existing conditions and not be increased;
- Developer should consider the rate of runoff into the watercourses which are located within the site. Any significant increase may increase the flood risk downstream.

4.2 As an internal consultee, this is a response to assist the Planning Authority's decision in this application. All queries from the applicant regarding information supplied by the FRMT should, in the first instance, be directed to the appropriate Planning Officer.

5 Council Landscape Architect

5.1 There is currently significant pressure on landscape resources and the focus of time will be on planning application casework. Any landscape preapp and scoping input that can be made will primarily be based on a desk exercise, and any existing familiarity with the area.

5.2 I made a site visit for Appin Wind Farm on 21 April 2022 in excellent conditions of visibility, taking in the Shinnel Water and Cairn Water valleys, approaching up Mid Nithsdale. The proposed viewpoints I visited were VPs 3, 4, 13 and 15; and I also visited the Keir Hills from above Breconside near The Mull. I am reasonably familiar with several the other proposed representative viewpoints, and the general area, from dealing with other casework. **There may be further representative viewpoints, assessment and visualizations required, as the scheme progresses**; of note given the scale of the scheme and sensitivity of the landscape and visual receptors potentially affected.

5.3 The landscape advice provided is without prejudice to future advice and opinion, or any decision which the Council as planning authority may choose to make in respect of any future planning application. Furthermore, it should not be assumed that every issue which might impact on any such application has been addressed in this report; other issues may come to light because of consultation with other relevant bodies, or in relation to any future planning application.

5.4 One landscape opinion only will be provided to schemes at scoping, and all further enquiries are to be referred directly to the planning case officer.

Initial comments

5.5 Based on consideration of the landscape data base and review of the DGWLCs I have the following initial comments to make:

- Appin as a stand-alone scheme, but also in addition cumulatively to Sanquhar 2 (at appeal) if that scheme proceeds, would give rise to significant landscape and visual effects on the Shinnel Water valley in up-valley views from properties and sequentially along the minor road from the A702 to Appin

Lodge, and onwards along core path /access road to Shinnelhead. From Craigencoon onwards up the valley the impacts of the 230m turbines on the setting, character, views and visual amenity of the valley would be likely to be overwhelming. The size and proximity of the turbines and their prominent position around the ridgelines above the valley would be out of scale with the valley. The layout of the arrays, which would be seen foreshortened and with maximum congestion in up-valley views would give rise to maximum stacking and overlapping of rotors, and consequent visual confusion.

- Appin turbines would individually and together detract from and at times overwhelm the setting and visitor experience, including key views to and from all the Striding Arch Sculptures. This scheme would potentially compromise the recreational and artistic value of the noteworthy work by Andy Goldsworthy.
- Appin as a stand-alone scheme, but also in addition cumulatively to Wether Hill and Sanquhar 2 (at appeal) if that scheme proceeds, would give rise to significant visual effects on elevated views for other hill walkers: particularly from the popular summit of Auchengibbert Hill and the Keir Hills to the southeast; and, Cairnkinna to the northeast, and the SUW near cloud Hill to the north.
- Specific scale effects are anticipated from individual turbines in relation to other landscape features. For example:
 - A 230m turbine sited on Croglin Crag, which is a distinctive feature in the Shinnel Valley, and only rises approximately 210m from the adjacent valley floor.
 - Markreach Hill is a craggy valley-side feature and should be avoided as a site for a turbine.
- The proximity and prominence of the Appin scheme to the Thornhill Uplands RSA, would be likely to give rise to significant effects. There would be a high degree of intervisibility of the turbines indicated on the ZTV across two thirds of the designated area, and over key viewpoints including the SUW over Cloud Hill, and Cairnkinna as well as summits of the more distant Lowther Hills. There would also be more distant views from key Galloway Hills RSA viewpoints such as the Cairnsmore of Carsphairn, and the Rhinns of Kells summits.
- Appin would have a poor fit in relation to guidance contained in the DGWLCS, particularly regarding direct and / or indirect effects on the Ken unit (LCT 19a), the Keir unit (LCT 18), and Shinnel Water unit (LCT 10).
- There would also be indirect effects arising from Appin, particularly notable for neighboring and nearby landscape, sensitive to wind farm development: other upland glens, the Castlefairn and Dalwhat unit (LCT 10); other foothills, the Tynron, and the Damacallan units; and surrounding uplands, the Nithsdale and Carsphairn units of Southern Uplands (LCT 19).
- The Ken unit (LCT 19a) was noted as reaching capacity for development in the DGWLCS, and after this guidance being published Lorg and Cornharrow have been consented; along with several schemes bordering the unit in the Stroan foothills to the south, including Troston Loch, Margree, and Glenshimmeroch. Also of considerable concern is the large number of undetermined schemes: Shepherds Rig, Cornharrow (turbine height increase), and Sanquhar 2 are all within or partially within the Ken unit (LCT 19a) and are pending Appeal decisions; Euchanhead is a planning

application, as is Lorg (also turbine height increase). Notwithstanding the stand-alone landscape and visual effects from Appin, the scheme would be problematic as a cumulative addition.

- Aviation lighting is a concern given the prominence of the scheme across several sensitive receptors, and also regarding the Galloway Forest Dark Sky Park; the scheme lies partially within the Transition zone.

Policy and Guidance

1.1 Development Plan LDP2

1.1.1 Policies and associated guidance; The development plan for the area currently comprises the Dumfries & Galloway LDP2, adopted October 2019, takes primacy in the determination of planning applications, and would be a key material consideration in the consideration of this Section 36 application. The key relevant policies for this scheme are likely to be policies OP1, OP2, IN1, IN2, NE2, and ED11,

1.1.2 Policy IN2 and associated supplementary guidance; Policy IN2: Wind Energy is the main policy for wind energy development (WED) and has reference to landscape and visual impacts, cumulative impact, impact on local communities and residential interests, tourism and recreational interests; and a number of other non-landscape matters. The Spatial Framework Map 8 provides strategic guidance and must be read in conjunction with the DGWLCS. *Acceptability* in relation to IN2 is judged with respect to compliance with the DGWLCS guidance for the host landscape units / LCTs, and also with respect to indirect effects on the surrounding units.

Supplementary Guidance, Wind Energy Development: Development Management Considerations (February 2020) supports IN2. This has special relevance for landscape in relation to sections C Landscape and Visual Impacts and Design of Proposals, D Cumulative Impact, E Impact on Local Communities and Residential Interest, and H including Tourism and Recreational interests; and Appendices A, B, and C:

- Appendix A: Landscape Character Sensitivity Summary Tables.
- Appendix B: There are Landscape and Visual Sensitivity maps for each development typology, with Map 5 for 'Very Large' of relevance for this scoping scheme.
- Appendix C: The landscape capacity study for wind energy development, the DGWLCS (2017) forms Appendix C of the 2019 WED Supplementary Guidance. Full reference to the key findings and detailed assessments of host and indirectly affected landscape units / LCTs should be made to the DGWLCS in the LVIA.

1.1.3 Other key relevant policies; The proposals will also be assessed in landscape terms with reference to the following policies:

- Policy OP1: Development Considerations is an overarching policy with special relevance for landscape issues, including landscape character, scenic qualities, wild land character, and local distinctiveness.
- Policy OP 2: Design Quality and Placemaking is overarching policy with special relevance for design quality and the built and natural environment; and

where respecting important physical, historic and landscape features of the site and vicinity is important.

- Policy IN1: Renewable Energy applies to all renewable energy and has a reference to landscape, and the amenity of the surrounding area, including landscape and visual impacts, cumulative impacts, and impacts on tourism and recreational interests.
- NE2: Regional Scenic Areas relates to the siting and design of development to respect the special qualities of RSAs, such that factors of designation would not be significantly affected. The Technical Paper, Regional Scenic Areas (January 2018) remains the key reference with respect to RSAs, although the DGWLCS provides updated information on landscape character in relation to WED and should be referenced alongside the RSA Technical Paper. Parts 1, 2, and 3 of the Technical Paper are of relevance and should be considered in the LVIA.
- ED11: Dark Skies relates to appropriate levels of lighting and good lighting principles and practice to accord with the Supplementary Guidance in D&G, particularly with reference to the objectives of the Galloway Forest Dark Sky Park. This is likely to be relevant to turbines >150m, requiring aviation lighting. The Supplementary Guidance, Dark Sky Friendly Lighting (February 2020) should be referenced.

1.1.4 Wind farm typology and policy fit; Appin Wind Farm site lies within D&G. In terms of development typology, the proposals for 25no. x 230m tip height turbines need to be considered in the Very Large category (>150m):

- Under LDP2 Spatial Framework Map 8, which complies with SPP guidance, the site falls within an *Area with potential for wind farm development*.
- The proposed turbines lie in / immediately adjacent to three landscape character types / units: most / twenty one of the turbines are within Southern Uplands with Forest (LCT 19a) Ken unit.
- Two turbines lie on the boundary with the Keir Foothills (LCT 18), which was not assessed for Very Large typology turbines as was considered unsuitable for Large/ larger typologies in the 2017 review of the DGWLCS.
- Two turbines lie on the boundary with the Shinnel Water Upland Glen (LCT 10), which also was not assessed for Very Large typology turbines as was considered unsuitable for larger typologies in the 2017 review.

National policy and guidance

1.2.1 GLVIA3; An LVIA should be undertaken in accordance with GLVIA3 (2013).

1.2.2 NatureScot guidance; The following should be referenced in terms of the landscape, visual and cumulative assessments in the LVIA:

- Siting and Designing Wind Farms in the Landscape V3 (2017).
- General pre-application and scoping advice for onshore wind farms (May 2020), particularly with reference to Annex 2 advice on the scope of landscape and visual assessment for turbine lighting.
- Visual Representation of Windfarms (SNH, 2017).
- Spatial Planning for Onshore Wind Energy Development (2015).
- Cumulative Effects of Windfarms (SNH, 2005).
- Assessing the cumulative impact of onshore development (SNH, 2012).

- Landscape Character Assessment for Dumfries and Galloway (2019) is the updated NatureScot LCA for the region, and should be used alongside the DGWLCS, which provides more detail descriptions and guidance.
- Assessing Impacts on Wild Land Areas: Technical guidance (September 2020); and the Wild Land Areas map and descriptions (2014), with reference to 01 Merrick, and 02 Talla-Hart Fell.
- Landscape Character Assessment, Guidance for England and Scotland (Countryside Agency & SNH, 2002), and including Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity

1.2.3 Other;

- SPP (2014), or most recently updated version.
- NPF4, when adopted.
- Onshore Wind Policy Statement, Scottish Government (December 2017), or most recent version; this is undergoing a refresh.
- Visual Representation of Development Proposals, Landscape Institute (September 2019).

Study area

1.3.1 Detailed study area; The study area for the Environmental Impact assessment is a radius of 45 km from the outermost turbines. The detailed landscape and visual study area should be 25km in this instance, taking in the most prominently theoretically visible areas of Nithsdale and the Glenkens at up to long range. The watersheds / headwaters of these two major valleys lie within 15 km of the scheme and include pronounced upland glens and valleys, as well as foothills and ridges and summits of the Southern Uplands.

The Scoping Report indicates all landscape character types beyond 6 km as being scoped out, except for Pastoral Valley (LCT 5 / 171). I think that this is tight in terms of distance, even for landscape interests. However, in terms of checking proposals against the DGWLCS, then wider landscape context and visual issues are covered, which would in any case take in a wider landscape approach.

Landscape

2.1 Landscape receptors

2.1.1 Landscape receptors; *An assessment of landscape effects deals with the effects of change and development on landscape as a resource. The concern ... is with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character. The area of the landscape that should be covered in assessing landscape effects should include the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner. GLVIA3, 5.1 & 5.2 (2013)*

2.1.2 Summary of anticipated landscape effects; The broader landscape character type mapping and categorisations for the DGWLCS approximate to the NatureScot 2019 LCA across this area; alternative numbering provided. The named

units in the DGWLCS are a more detailed grain of description and assessment and should be referred to in the LVIA:

- Main host landscape character unit: Ken unit of the Southern Uplands with Forest (LCT 19a / 178),
- Potentially second host landscape character units: Keir unit of the Foothills (LCT 18 / 175); and Shinnel water unit of Upland Glens (LCT 10 / 166).
- Local landscape characteristics and any aspects of local distinctiveness, including any direct impacts and indirect on setting and experience of features and places within and outwith the site. The key features of concern are thought to be the distinctive Croglin Crag; the crags of Markreach Hill; the open summits of Lamgarroch, Blackcraig Hill, and Colt Hill around the head of Glen Appin; the latter summit is occupied by one of four Striding Arch Sculptures, all at short range; and Appin and Shinnelhead farm steadings.
- Forestry and woodland areas, including any future plans for forestry within the proposed wind farm site.
- Surrounding LCTs / LCUs within 25km, as covered by the DGWLCS (2017) and with indicated intervisibility on the ZTV:
 - Ken unit (LCT 4 / 160);
 - Cairn unit (LCT 5 / 161);
 - Nithsdale unit (LCT 7 / 163);
 - Upper Glenkens and Upper Nithsdale units (LCT 9 / 165);
 - Castlefairn and Dalwhat, and Scar units (LCT 10 / 166);
 - Torthowald and Ae Fringe, and Keir units (LCT 16 / 172);
 - Dalmacallan, and Tynron units (LCT 18 / 175);
 - Stroan, Ae, and Rhinns of Kells units (LCT 18a / 176);
 - Nithsdale, Lowther, and Carsphairn units (LCT 19 / 177); and
 - Rhinns of Kells unit (LCT 21 / 180).
- The setting, value and experience of designated landscapes, and any other aspects of recognised landscape value. The Striding Arch Sculptures and associated arts trails are of recognised landscape value, in terms of the arts and recreation.

DGWLCS review

2.2.1 Scope of consideration of the DGWLCS guidance; Fit with the DGWLCS, along with LVIA assessment, is a test for policy IN2.

- The proposals mostly occupy the Ken unit of Southern Uplands with Forest (LCT 19a), comprising two narrow ridges extending out from Colt Hill around the Appin Burn valley, a tributary of the Shinnel Water. The northeastern fringes of the site are within the Shinnel Water Upland Glen (LCT 10), and to the south it bounds the Keir Foothills (LCT 18). Significant direct landscape effects and visual effects are anticipated for the Ken unit (LCT 19a), with direct and / or indirect effects on the Keir (LCT 18), and Shinnel Water (LCT 10) units; and significant cumulative effects, particularly for the Ken unit (LCT 19a). An initial review of the DGWLCS for the three potential host units is set out below in 2.2.2-2.2.4, with the most relevant excerpts.
- Indirect landscape and visual effects on the other units within 25 km should also be considered regarding the DGWLCS guidance. The most relevant landscape units / types are listed in 2.2.5 below, but these should all be

reviewed in terms of potential indirect landscape, visual and cumulative effects.

2.2.2 Host landscape, Ken unit of the Southern Uplands with Forest (LCT 19a); The DGWLCS notes that the Southern Uplands with forest (LCT 19a) is a generally *‘expansive, gently undulating upland plateau of smoothly rounded hills.... Occasional more well-defined hills occur close to ...Dalwhat and the Upper water of Ken Glens, mostly on the outer edges of this character type. These are more prominent in views from surrounding roads and settlement than the very sparsely settled interior of these uplands. Extensive coniferous cover masks landform and there is often little open ground with this largely confined to grass moorland within valleys and on the higher hill tops and ridges. An exception to this is the Ken unit which has a greater proportion of open ground to forest cover. Wind farm development is a key feature...’* (25.2)

Summary of sensitivity: The Southern Uplands with Forest LCT (19a) are categorised as being High-medium for the Very Large typology (turbines 150m+) and Medium Sensitivity for Large turbines. (25.2)

Cumulative issues: Cumulative effects are identified as more likely to occur in the Ken and Carsphairn units (LCT 19a), associated with Wether Hill, Windy Standard, Hare Hill, Sanquhar Community Wind Farm, all now operational (along with other subsequent consented schemes Cornharrow and Lorg, and several other committed schemes in nearby units such as Twenty Shilling, Whiteside, and Windy Rig (all LCT 19), Troston Loch, and Fell (both LCT 18a)).

The DGWLCS states, *‘Key cumulative effects that could occur if additional wind farm development was located in the Ken and Carsphairn units include:*

- *The potential creation of a concentrated band of wind farm development visually linking wind farms located in the Ken unit with the Blackcraig and Mochrum wind farms located in the Stroan unit of the Foothills with forest (18a) to the south.*
- *Additional development located in the Ken unit which could exacerbate impacts on adjacent Narrow Wooded Valleys (4) and Upland Glens (10) and effects on the SUW and other recreational routes.*
- *...cumulative effects would arise on more elevated views from popularly accessed hills such as the Cairnsmore of Carsphairn and from the Rhinns of Kells as well as from the SUW and Striding Arches in the Ken unit.’* (25.2.1)

Constraints:

- *‘The arc of hills which includes Benbrack, Cairn and Blackcraig which form a key focus at the head of the Dalwhat Water within the Ken unit. The presence of the SUW and the landmark sculptures of Striding Arches add to the sensitivities of this area.*
- *Occasional areas of more complex landform....dramatic open hills at the head of the Ken unit are of increased sensitivity.*
- *Potential for cumulative effects to arise...’* (25.2.2)

Guidance on development: *‘There is some scope for the Very Large typology (turbines 150m+) to be accommodated in this character type but only in the*

Eskdalemuir unit, which is undeveloped, very extensive in scale and distant from more settled areas.....

Capacity for additional development is likely to be very limited within the Ken unit, although some scope for repowering and / or small extensions to operational wind farms may be possible provided that effects on promoted recreational routes and on more sensitive glens are minimised. Limiting turbines to the height of around 150m would fit better with the scale of the Ken unit.

All development should avoid the more pronounced open topped hills which provide an important backdrop and containing edge to smaller scale valleys and upland glens and areas of more complex landform.’ (25.3)

Detailed guidance table: The detailed guidance table does not identify scope for development of Very Large typologies except in the core or interior of the extensive Eskdalemuir unit (Landscape context), *‘without widespread significant visual impact’* (Views and visibility) *‘development sited in the more sensitive outer hills would dominate the scale of adjacent settled valleys and glens.’* Open hill tops (Land cover), pronounced open hills and occasional areas of more complex landform and notably incised valleys (Landform), and *‘smaller hills found on the outer edges of this landscape and also the hills which abut valleys where effects on scale would be appreciated from roads and settlements’* (Scale and openness) are all noted as increasing sensitivity to Very Large and Large typologies.

2.2.3 Host Landscape, Keir unit of Foothills (LCT 18); The three southernmost turbines lie within a few hundred metres of the Keir unit of Foothills, with two of these turbines lying on or very close to the border of the Keir unit (LCT 18). This unit is grouped with the Tynron unit for consideration in the DGWLCS, which states these foothills have an often-irregular landform with well-defined peaks; providing a backdrop to the Scar, Shinnel and Dalwhat glens, as well as the Cairn Valley and middle Nithsdale, *‘where their open rugged slopes are scenically juxtaposed with these more intricately patterned and settled landscapes.’* (22.12)

Summary of sensitivity: Sensitivity is not assessed for the Very Large typology; sensitivity to Large and Medium typologies (50-150m) is assessed as High, with the low relief and complex landform of the foothill’s key factors in increasing sensitivity to larger turbines; as is the proximity to well-settled glens, valleys and dales, and associated settlements, roads, and footpaths within the hills themselves. Landscape value is high for large and medium typologies in the Keir unit, due to designation of the Thornhill Uplands RSA. (22.12)

Cumulative issues: Proximity of the northern extent of the Keir unit (LCT 18) to Wether Hill in the Sothern Uplands with Forest (LCT 19a); and, Whiteside and Twenty Shilling (both Nithsdale unit of LCT 19) would be likely to be visible from upper slopes and summits. The DGWLCS states that *‘Large turbines sited on these hills could contribute to cumulative effects experienced from adjacent settled glens and valley.’* (22.12.2)

Constraints: Appin would be at the transition between the uplands and open foothills and of concern to some degree regarding the listed Key constraints (22.12.3), including:

- *‘The setting and contrast these open rugged hills provide to the Upland Glens (10), Intimate Pastoral Valleys (5), and Dales (7) and to the small settlements of Tynron and Moniaive.*
- *Views from the hills with popular walking routes; notably Tynron Doon, Auchengibbert, and the Keir Hills.*
- *A strong sense of naturalness and seclusion...*
- *The RSA designation, which covers the whole of these foothill landscapes in recognition of the value of their open sculptural ridges and scenic juxtaposition with the upland glens.’*

Guidance on development: *‘There are no opportunities to accommodate the larger typologies due to the significant adverse impacts likely to occur across a wide spectrum of sensitivity criteria.*

The small scale and scenic value of these landscapes makes them sensitive to extended and multiple developments in surrounding upland landscapes which seen in combination can easily dominate skylines, or successively surround these foothills.

All turbines should be sited away from prominent ridge lines seen from adjacent glens and valleys’ (22.13)

Detailed guidance table: The detailed guidance only covers Large and Medium turbines, but the principles are noted for Large and would be as equally / more relevant for larger typologies. Sensitivities of most relevance to the Appin turbines (230 m) include: the relatively low height and limited geographical extent of the hills would make them sensitive to scale effects (Scale and openness); steep hills slopes, irregular landform and distinctive rugged peaks (Landform); the scale and setting of any settlements, archaeological and historic features (Settlement and archaeology); the setting of Moniaive and Tynron, and the rugged backdrop and contrast the hills provide to the small scale and diverse character of the upland glens, valleys and Nithsdale (Landscape context); sense of naturalness and seclusion (Perceptual qualities). Of special note:

- *‘The narrowness of these bands of foothills and their proximity to well-settled dales, valleys, and glens increases sensitivity. This typology would be highly visible from roads, footpaths and settlement where it would interrupt presently open skylines.’ (Views and visibility)*

2.2.4 Host Landscape, Shinnel Water unit of Upland Glen (LCT 10); Two northeastern turbines lie on or very close to the border of the Shinnel Water unit (LCT 10), all of which are considered together in the DGWLCS. The capacity study describes these as, *‘...enclosed and often narrow, contained by steep sides which rise to form irregular ridgelines. The narrowness and enclosure of these glens create a contained and relatively small scale landscape and this severely limits the scope for larger wind farm typologies.’ (13.2)*

Summary of sensitivity: Sensitivity is not assessed for the Very Large typology; sensitivity to large, medium, and small-medium typologies (20-150m) is assessed as High, due to the above description of character and scale issues. (13.2) Landscape values are noted as High-medium across these typologies, reflecting the designation of most Upland Glens (LCT 10) as RSAs. In this case the Thornhill Uplands RSA

does not extend in to the upper reaches of the Shinnel Water unit (LCT 10); the forestry is regarded as a detractor from the special qualities.

Cumulative issues: the DGWLCS notes that Wether Hill is seen at the head of the Water of Dalwhat Upland Glen (LCT 10), and that Blackcraig would be / is similarly be experienced seen at the head of the Castlefairn glen: *'Hills and ridgelines at the head of the Upland Glens form a focal point in key views along these glens and significant adverse cumulative effects could arise if this pattern is repeated at the head of other upland glens, particularly in the same vicinity.'* (13.2.1)

Constraints:

- *'The narrowness of the glens, which limits scope for larger typologies which would dominate their limited extent and scale.*
- *The dramatic forms of steep sided hill flanks and ridges.*
- *The upper edge of the valleys, where the irregularly shaped enclosing ridgeline is visually prominent against the sky when viewed from within the glen and which would be sensitive to wind turbines sited in these glens and in adjacent upland areas.*
- *The heads of the glens which are often the focal point in views...*
- *Archaeological features and broader historic landscapes, often associated with the unimproved grassland on the side slopes.'* (13.2.2)

Guidance on development:

'There is no scope for large, medium and small-medium scale typologies (turbines >20m) to be accommodated within this character type without significant adverse impacts occurring on key landscape and visual sensitivities.'

'The small scale and narrowness of these glens make them particularly sensitive to extended and multiple developments sited in surrounding uplands and seen on prominent skylines which may be seen successively or appear to surround the area. The glens are experienced from key tourist routes and minor roads enjoyed for quiet recreation, with valued scenery.' (8.3)

Detailed guidance table: The detailed guidance only covers Small-medium turbines (20-50m), but the principles are noted and would be as equally / more relevant for larger typologies. Sensitivities of most relevance to the Appin turbines include: the narrow valley floors and sense of depth where turbines would appear out of scale diminishing the drama of the valleys (Scale and openness); the rhythm of undulating ridgelines, sculptural and dramatic hill forms, sheer-sided valley slopes, would all be disrupted by turbines interrupting the skyline; and also engineered access tracks (Landform); scale issues where turbines dominate small features, such as clumps of trees, small woodlands, and fields (Landcover and landmark features); turbines could easily overwhelm small farms and individual properties, and the setting of archaeological and historic features (Settlement and archaeology); even the small-medium typology could become visually dominant within the smaller spaces of narrow glens, or intrude on the focus of linear up-valley views; and the irregular ridges would be sensitive to development perched along the prominent skyline either within the glens or adjacent uplands and foothills (Visual amenity); and turbines could detract from the dramatic hill slopes of the Southern Uplands which contain the glens by introducing larger elements, diminishing the contrasts between the small size of domestic buildings and sheer-sided mass of the hills.

2.2.5 Other LCTs

Within 25 km the ZTV indicates visibility at short / long range with:

- Ken unit (LCT 4);
- Cairn unit (LCT 5);
- Nithsdale unit (LCT 7);
- Upper Glenkens and Upper Nithsdale units (LCT 9);
- Castlefairn and Dalwhat, and Scar units (LCT 10);
- Torthowald and Ae Fringe, and Keir units (LCT 16);
- Dalmacallan, and Tynron units (LCT 18);
- Stroan, Ae, and Rhinns of Kells units (LCT 18a);
- Nithsdale, Lowther, and Carsphairn units (LCT 19); and
- Rhinns of Kells unit (LCT 21).

There may be potential for significant indirect landscape effects with these; indirect landscape and visual effects are anticipated, and reference to the DGWLCS should be made in terms of any specific guidance for development on indirect and visual effects, and detailed assessments for landscape context and visual sensitivities. Fit with the DGWLCS, along with LVIA assessment, is a test for policy IN2.

2.2.6 Local landscape character: The Very Large size of the turbines, and their position in relation to adjacent more sensitive local landscapes and receptors, would give rise to significant local impacts, which should be considered in the LVIA. A detailed landscape character assessment should be undertaken at up to 5 km from the scheme, as determined by the local characteristics and key views. Features to include, but this list may not be exhaustive:

- The assessment should take in all four of the Striding Arch Sculptures (Cairnhead, Colt Hill, Bail Hill, Benbrack), with descriptions of the features that make up their setting, including views to and from the works, and from along the promoted routes in between.
- Local landscape areas that make up the head waters and watershed of the tributaries of the Nith and Ken; including the Appin and Shinnel Water upland glens, the upper reaches of the Scar Valley, the Dalwhat Water upland glen, the Head of the Ken, and Lorg Corrie.
- Routes, sites, and properties important for sensitive visual receptors, such as SUW and other walkers, Striding Arch visitors, and residents.
- The sites and characteristics of any operational or consented wind farms, to ensure the siting and design of the Appin scheme is either sufficiently separated, or sited / designed to read as an extension with compatible design principles.

A local landscape character assessment should be undertaken, to cover these areas and any other local effects on the host units, and nearby units. The assessment should be undertaken to assess and mitigate against potential landscape and visual impacts on the local landscape and setting of natural and cultural landscape features, which contribute to its sense of place and local distinctiveness.

2.2.7 Landscape context and value

The ES / LVIA must test the landscape effects on individual landscape character types / units directly and indirectly affected, but must also address the effects on how

these landscape areas interact with each other, and the contribution this makes to the overall quality of the landscape: its wider character; how it is experienced in views, particularly for residents and visitors: settlements and dispersed properties; visitors to the Striding Arches and following the associated promoted routes; walkers along the SUW, other routes, and in the surrounding uplands and hills; and the designatable quality of surrounding RSA and designed landscapes.

The setting, value and experience of designated landscapes, and any other aspects of recognised landscape value:

- Regional scenic Areas: Thornhill Uplands, and Galloway Hills RSAs.
- Andy Goldsworthy Striding Arch Sculptures.
- Other tourist / visitor destinations: Moniaive and Thornhill villages / small towns; Tynron Doon Hill Fort local landmark and popular walk.
- The SUW long distance national trail.
- The Galloway Forest Dark Sky Park.
- Merrick Wild Land Area.
- Inventory and Non Inventory Designed Landscapes: Maxwellton House (IDL) and any others.

Visual Matters and Representative Viewpoints

3.1 Visual receptors

3.1.1 Pattern of visibility; The most prominently theoretically visible areas would be through the main and tributary valleys of Nithsdale and the Glenkens at up to long range. The watersheds / headwaters of these two major valleys lie within 15 km of the scheme and include pronounced upland glens and valleys, as well as foothills and ridges and summits of the Southern Uplands. The pattern of visibility would be:

- Extensive at short range / <5km: through the Appin and Shinnel Water tributaries of the Shinnel Water Valley; over the south facing slopes of the Kirkconnel tributary valley and the neighbouring head of the Cairn Valley; over the upland summits, ridges and slopes around these upland glens and broadly associated with Benbrack; to the north of the Scaur Water including the valley sides and upland ridges of Cloud Hill and surrounding Lorg Corrie.
- Broken up at medium range / 5-10 km: the summits, ridges, east facing upper slopes of the Carsphairn hills; north facing slopes of the Castlephairn valley; the Dalmacallan and northern end of the Keir foothills.
- Medium to long range / 10 – 20 km: the south and west facing slopes of upper and mid Nithsdale and the Lowther Hill uplands; Dundough and Culmark Hills; and the northeast facing slopes of the Glenkens, including the Rhinns of Kells.

3.1.2 Visual receptors;

An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity. The concern ... is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views. ... Scoping should identify the area that needs to be covered in assessing visual effects, the range of people who may be affected by these effects and the related viewpoints in the study area that will need to be examined. GLVIA, 6.1 & 6.2 (2013)

3.1.3 Summary of anticipated visual effects; Residential receptors:

- Local properties, dispersed, in hamlets and small settlements, generally within 3km, but possibly up to 5km if properties orientate to the site:
 - Remote properties within or close to the site boundary including, Appin, Appin Lodge, Fairy Craig, Upper Appin and Shinnelhead.
 - Others along and accessed off the Shinnel valley road including, Old Auchenbrack, Auchenbrack, Kilmark, Craigencoon.
 - Properties along and accessed off the upper Dalwhat valley road including, Blairoch, Benbuie, Upper Glenjaan, Lower Glenjann, Corriedow.
 - Possibly properties along and accessed off the Head of the Ken valley road including, Upper Dalquhairn, Nether Holm of Dalquhairn, Corlae.
 - Possibly properties along and accessed off the upper Scaur valley road including, Polskeoch, Dalgonar, Polgown.
- Villages and towns, medium and longer range, particularly where the ZTV indicates a high degree of visibility: Tynron, Moniaive, Wallaceton, Dunscore, Closeburn, Thornhill, and possibly properties over more elevated areas of Sanquhar and Kirkconnel.

Recreational receptors:

- Walkers: hill walkers to popular Auchengibbert and the Keir Hills, the Carsphairn, and the Lowther hills; and other walkers on core paths, promoted trails and heritage walks including, the SUW, the routes accessing the hill-top Striding Arch sculptures, and the Carsphairn Heritage Trails at Lorg, Dundough Hill, and Bardennoch.
- Visitors to tourist attractions: other car-based visitors to Cairnhead Striding Arch and associated installations, and visitors to the Crawick Multiverse.
- Cyclists and motor-tourers: the quiet recreation afforded by the character and scenery, network of quiet country roads such as the B729, and minor roads particularly those around accessing the Cairn, Dalwhat, and Shinnel Water valleys on single track roads with passing places.
- Visitors to the local towns and environs of Moniaive, Thornhill, appreciating the local walking routes, and scenic drives in the surrounding upland glens.

Others:

- Any key views from RSAs: most notably the Thornhill Uplands RSA, including Cairnkinna, Wauk Hill, and Auchengibbert Hill; and, more distant views from popular summits of the Carsphairn Hills and Rhinns of Kells in the Galloway Hills RSA, and the Lowther Hills RSA.
- Any key views from Inventory / Non Inventory Designed Landscapes (NIDL): Maxwelton House

3.1.4 Aviation lighting visualisations and assessment; The NatureScot scoping requirements (May 2020) are noted regarding the requirements for information on aviation lighting as set out in Annex 2. Please provide:

- A ZTV should be produced showing areas that would be affected by aviation lighting.
- Wirelines indicating the effects of aviation lighting for each turbine for every viewpoint.

- Assessment of aviation lighting for each representative viewpoint; and, sequential effects along the SUW and Shinnel Water valley road.
- Assessment of the cumulative effects of aviation lighting with other committed (operational and consented schemes), and at-Appeal Sanquhar 2.
- Full aviation lighting photomontage visualizations for particularly sensitive receptors such as:
 - Residential interest including dispersed properties and larger settlements.
 - Recreational interest sensitive to dark skies and lighting issues, such as key tourist and scenic routes (Striding Arches), long distant routes (SUW), campsites, event venues (Crawick Multiverse).
 - The Merrick Wild Land Area.
 - Other recognised remote or otherwise sensitive areas.
- Future full photomontage visualisations for any of the viewpoints as indicated as being required based on wireline information.

The Appin site lies partially within the Transition Zone of the Galloway Forest Dark Sky Park. With reference to the objectives of the Dark Sky Park, the DGC Supplementary Guidance, Dark Sky Friendly Lighting (February 2020) should be referenced.

Comments / requests for representative viewpoints / sequential visual assessments

3.2.1 Representative viewpoints, proposed; The following representative viewpoints are proposed in the Appin Scoping Report, with comments to the right.

Proposed representative viewpoint	DGC Landscape comments
1 Colt Hill / Striding Arch	Agree
2 Benbrack / SUW / Striding Arch	Agree
3 Shinnelhead	Agree
4 Shinnel Water valley, nr Craigencoon	Agree – Craigencoon access provides a wcs, but see below regarding additional wirelines.
5 Cairnhead / Striding Arch	Agree – check micro siting wrt local tree cover and landform
6 Cairn Table	
7 Crawick Multiverse	Agree – please also provide a wireline from the Fingland access road, towards Todholes Hill.
8 Lowther Hill	I suggest East Mount Lowther viewpoint would be a better alternative.
9 SUW / Whing Head	SUW near Cloud Hill may be a better alternative – ensure open outlook, e.g., GR: 73 7 04 9, or GR: 74 4 05 0.
10 Wauk Hill	Agree
11 A713 Stroangassel	Micro siting may be difficult. Dunbeg on Dundegh Hill may be a better alternative, GR: 60 9 89 7.
12 Cairnsmore of Carsphairn	Agree

13 A76 south of Closeburn	Agree
14 Durisdeer Rig	Agree
15 A702 Shinnel Water valley	Agree – suggest GR: 82 3 91 4, 100m set back from T junction.

3.2.2 Additional requests for representative viewpoints;

Requested representational viewpoints as full photomontage visualisations:	Reason
Bail Hill	Striding Arch site.
Cairnkinna	Important Thornhill Uplands RSA viewpoint.
GR: 93 0 97 5, minor Ae / Thornhill road	Important reveal and good outlook on Nithsdale recreational / scenic route.
Requested representational viewpoints as wirelines and baseline photographs:	
Auchengibbert Hill	Part of the popular Tynron Doon circuit.
Corserine, Rhinns of Kells	Important Galloway Hills RSA viewpoint.
Queensberry	Important Lowther Hills RSA viewpoint.
Thornhill environs	Mid Nithsdale village, visitor destination.
Dunscore environs	Cairn Water valley village.
Wallaceton environs	Cairn Water valley village.
Maxwelton House	Inventory Designed Landscape.
GR: 76 8 94 1, Corriedow	Wcs receptor in Kirkconnel valley.
GR: 71 7 94 2, Lower Glenjaan	Wcs receptor in Dalwhat Water valley.
Wirelines and baseline photographs, as part of sequential assessments:	
<p>Shinnel Water valley, additional visualisations / baseline photographs and wirelines, including Appin and Sanquhar 2 turbines, differentiated and numbered. This should form part of the sequential assessment and include the following important reveals ascending the glen.</p> <ul style="list-style-type: none"> • Appin Lodge, if not included in an RVAA • GR: 76 1 96 7, 191m spot height • GR: 76 5 96 6, nr Auchenbrack • GR: 77 0 96 3 • GR: 77 6 95 3, nr prehistoric Cairn • GR: 78 6 93 9, nr Birkhill • GR: 81 4 92 2, approaching Lann Hall 	<p>The view opens out up the main Shinnel Water valley, and then the Appin Burn tributary valley in several reveals ascending the valley on the minor road. Both Appin, and Sanquhar 2 if approved would impact on these up-valley views.</p>

<p>SUW, additional visualisations / baseline photographs and wirelines, including Appin, operational, consented turbines and at Appeal Sanquhar 2 turbines, with the various schemes differentiated and Appin turbines numbered. This should form part of the sequential assessment and include the following important viewpoints.</p> <ul style="list-style-type: none"> • Culmark Hill • Conrig Shoulder • Lowther Hill 	<p>From these more elevated views Appin would appear as a skyline feature and contribute to the emerging pattern of wind farm development in the upland watersheds between the Glenkens and Nithsdale. Appin, along with other committed schemes, potentially Sanquhar 2, and some other application schemes, would increase the degree of development as an influence on landscape character, and as an increasingly dominant skyline feature.</p>
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3.2.3 Suggested night-time representative viewpoints for photomontage visualisations; Please prepare full photomontage visualisations for the Appin aviation lights. Also, for a cumulative assessment of night-time aviation lighting effects please prepare a set of wirelines with labelled operational, consented, and in-planning schemes where aviation lighting will / would be part of the proposals.

The proposed list is a long-list and should be refined further to consideration of wirelines to check whether turbine hub lighting would be visible.

Proposed night-time viewpoints	Reasons
3 Shinnelhead or consider a property in the Appin Burn valley as alternative.	Sensitive residential receptor at proximity.
4 Shinnel Water valley, nr Craigencoon	Good wcs scenario from the main Shinnel water valley.
5 Cairnhead / Striding Arch, or GR: 71 7 94 2, Lower Glenjaan	Sensitive recreational receptor at proximity – although check if any of the lights would be visible over the Dalwhat Water valley edge; otherwise choose residential receptor.
7 Crawick Multiverse	Sensitive recreational receptor – although check if any of the lights would be visible.
15 A702 Shinnel Water valley, GR: 82 3 91 4, 100m set back from T junction.	Proxy for up-valley views for road-users and residential.
GR: 93 0 97 5, minor Ae / Thornhill road.	Important reveal and good outlook from recreational / scenic route, and a wcs for the Thornhill environs.
Dunscore or Wallaceton environs.	Sensitive settled valley receptor – although check if any of the lights would be visible.

3.2.4 Requests for sequential assessments along routes; Please provide a sequential assessment of the following routes, with a detailed ZTV, and baseline photos and wirelines at appropriate intervals to consider the extent and nature of

visibility of Appin, and other committed (operational and consented) wind farms, as well as at Appeal Sanquhar 2.

- The SUW northwards between Culmark Hill and Black Hill (N of Benbrack), and southwards from Conrig Shoulder to the same point.
- The Shinnel Water valley road from the A702 to Appin Lodge.

3.2.5 Visualisations; please provide the following for the above to meet SNH (2017 and 2020) and LI (2019) guidance:

- Cumulative wirelines, with other existing, consented, in-planning windfarms / wind turbines labeled / numbered
- Photomontage / cumulative photomontage, with existing and consented windfarms / wind turbines labeled / numbered
- Visualisations to show aviation lighting, for an agreed list of sensitive viewpoints
- ZTV to show areas affected by aviation lighting

Site work for DGC landscape input is limited at preapp and scoping due to resources. The viewpoint lists provided reflect interpretation of a variety of data bases, as well as interpretation of the ZTV and OS maps. The total number of viewpoints recommended varies from scheme to scheme and reflects sensitive receptors, the topographic complexity of the landscape and associated visual inter-relationships and anticipated cumulative issues. Recommended types of visualisations reflect their use and likely stakeholder interest. The balance of representation across distance ranges is determined by the sensitivities of an area and anticipated significant effects. Inclusion of representation for highly sensitive receptors may be recommended, even where effects are not anticipated to be significant, for demonstration purposes.

Please note the following general points regarding proportionality of approach with respect to viewpoint selection:

- The viewpoint list provided by DGC represents the range of anticipated receptors for a scheme and it is expected the Developer will refine this, given the more in depth site knowledge their own work entails.
- Where two viewpoints are close together, it may be that one of these is a worst case scenario (wcs) and is chosen to represent both. Alternatively, both may have a role for different functions; as representative, specific, or illustrative, or sequential viewpoints.
- Inclusion of private residential properties is recommended by DGC within 2km of schemes, and possibly more where specific cumulative issues are anticipated. This is considered appropriate given much of the rural area is characterized by a dispersed settlement pattern, which at times can be quite dense. Limiting representative viewpoints to designated settlements would not always provide the Authority or local people the opportunity to understand potential / likely effects.
- The visual effects assessments are sometimes carried out as part of a residential amenity assessment, in which case this will supplement the normal LVIA for a project.
- Residential properties can also provide representation for the minor road and core path networks, and the wider public amenity. More distant residential

receptors can be included as a focus for representation of such other interests.

- It is recommended that the Developer review all the identified viewpoints and decide on the most appropriate to do full assessments and visualisations for. To do this all the viewpoints should be site checked to help determine the most representative and worst case scenarios. This initial assessment could form an Appendix in the ES, and baseline photographs usefully provided to illustrate the key points.
- *Visual receptors, and views that have been identified as unlikely to experience significant visual effects either at scoping or in establishing the baseline should not be included in the detail reporting but should be noted, with reasons given for their exclusion.* GLVIA 3, 6.24 (2013)

Cumulative

4.1 Cumulative context

4.1.1 Host landscape units; There are other existing, and consented wind farm developments in the host Ken unit of Southern Uplands with Forest (LCT 19a):

- Operational Wether Hill, with which there would be a high degree of proximity and intervisibility in adjacent uplands; and parts of operational Sanquhar Community, and Sandy Knowe wind farms, which are more set back in upper Nithsdale.
- Consented Lorg (now in application to increase turbine heights), which would be immediately adjacent to the north, and with which a high degree of intervisibility is anticipated; consented Cornharrow, which is set down at a lower level and beyond the Dalwhat valley; and consented Sanquhar 6 in the uplands across the Nithsdale watershed.
- Sanquhar 2 is an at appeal, which would be immediately across the head of the Shinnel Water valley, with approximately nine turbines on or adjacent to the Ken unit (LCT 19a). There would be a high degree of proximity, intervisibility, instances where the scheme would be seen in-combination with Appin, and scope for significant cumulative effects.
- In planning Euchanhead lies partially in the Ken unit (LCT 19a), occupying ridgelines between Lorg and Sanquhar 2.
- Shepherds Rig is an at appeal scheme, which would be set back down and across the Head of the Ken valley. There would be some intervisibility between the schemes, but Shepherds Rig is notably at lower elevation.

There is no committed development in either of the other two host units: the Keir Foothills unit (LCT 18), or the Shinnel Water unit of Upland Glen (LCT 10).

4.1.2 Other nearby landscape units; In the adjacent Nithsdale unit of Southern Uplands (LCT 19):

- Operational Whiteside and Twenty Shilling wind farms, which would be set back beyond the Scaur Water, but as upland schemes a high degree of intervisibility with Appin and seen in combination when seen from elevated viewpoints.

- At appeal Sanquhar 2 largely occupies the Nithsdale unit (LCT 19), extending north over the open summits from the array of turbines along the boundary with the Ken unit (LCT 19a).

In the adjacent Carsphairn unit of Southern Uplands (LCT 19):

- Operational Windy Rig, and parts of Windy Standard 1 and 2 wind farms, which would be set back beyond the Head of the Ken but as upland schemes a high degree of intervisibility with Appin and seen in combination when from elevated viewpoints.

In the adjacent Stroan Foothills unit (LCT 18):

- Operational Blackcraig lies at medium / longer range to the south, well set back beyond upland and foothill landscapes.
- There are several consents in the Stroan unit (LCT 18) including at closest range the emerging cluster of wind farms comprising Troston Loch, Fell, Margree and Glenshimmeroch (now in application to increase turbine heights), which would be set back beyond the Dalwhat Water valley and Wether Hill ridgeline, and notably sited at lower elevation; other consents are more distant Knockman Hill and Mochrum Fell.

4.1.3 Broad pattern of wind farm development; At mid to longer ranges (8 – 20km) there are three main clusters of committed larger scale development:

- In the uplands to the north of the Carsphairn Hills, extending in to EAC, including in DGC: the three Windy Standard developments, Windy Rig, Afton, South Kyle, and Benbrack.
- In the uplands to the south and northwest of Upper Nithsdale, also extending in to EAC, including and bordering DGC: Hare Hill and Extension, Sanquhar and Sanquhar Six, Whiteside Hill, Lethens and Glenmuckloch; with Sandy Knowe spreading down in to the valley.
- In the uplands and foothills to the east of the Glenkens, with the larger emerging cluster of Margree, Troston Loch, and Glenshimmeroch, and the groups of Wether Hill and Cornharrow, Blackcraig and Fell.
- The large cluster of operational Harestanes and Minnygap lie to the west of Annandale in the foothills of the Lowthers.
- Notably more isolated schemes include: Twenty Shilling further east above Upper Nithsdale, Dalswinton much further south above mid Nithsdale, Lorg sited up in the watershed with the Glenkens, and Mochrum Fell lying much further south.

The ES will need to address potential interactions between the range of existing, consented, in-planning schemes and Appin. The Large and Very Large turbine sizes and resultant high degree of intervisibility, even within relatively enclosed landscapes, and especially at elevation, means that some significant cumulative effects could arise.

4.2 Cumulative impacts

4.2.1 Policy and guidance; The LVIA should fully assess all scenarios of potential cumulative effects under LDP2 policy IN2, and with reference to the DGC SG WED (2019), and SNH cumulative (2012) and siting and design (2017) guidance.

The status of schemes is dynamic as in-planning schemes that are refused return for appeals or are revised for resubmission. There are also changes to the design detail of approved schemes, with a number in DGC returned for revisions, most commonly increases in turbine height / rotor diameter. The up to date, and potential picture should be reflected in the LVIA, and a willingness to amend visualization material, at least with wirelines, to enable assessment of updated scenarios.

4.2.2 Schemes with greatest potential for cumulative interaction; In the current situation the main concerns are Wether Hill, consented Cornharrow and Lorg, with in planning Eucharhead and at appeal Sanquhar 2 also coming ahead of Appin in the application process.

4.2.3 Potential for significant cumulative effects;

- Cumulative landscape and visual effects on the uplands around the heads of the Shinnel, and Dalwhat Water valleys (LCT 19a), which include the Striding Arch Sculptures and the SUW. Appin in addition to Wether Hill, consented Cornharrow and Lorg, in planning Eucharhead and at appeal Sanquhar 2.
- Cumulative landscape and visual impacts on the Shinnel Water valley (LCT 10), which is a sensitive small scale upland glen landscape and includes residential and recreational interests. Appin in addition to at appeal Sanquhar 2, should it proceed.
- Cumulative landscape and visual impacts of the proposals on wider residential and recreational interests of the Dalwhat and Castlefairn Water valleys (LCT 10), the Keir and Tynron Foothills (LCT 18), and the Cairn Water Valley (LCT 5). Appin in interaction at times with operational Wether Hill and Blackcraig and consented Fell and Margree.
- Cumulative indirect landscape and visual impacts on popular summits and hill walking routes in the wider context, including Cairnkinna, the Lowthers, Carsphairn and Rhinns of Kells Hills. Appin in interaction with other elevated schemes influencing the landscape character and closing in undeveloped skylines.
- Indirect cumulative landscape and visual effects on the special qualities, landscape character and key views from the Thornhill Uplands RSA, in addition to Wether Hill and consented Lorg; and from the key Carsphairn / Galloway Hills RSA viewpoints. Appin in addition to Windy Rig, Lorg, Wether Hill, and Cornharrow.
- Cumulative visual effects in relation to consistency of wind farm siting and design. Appin in addition to Lorg, as well as Sanquhar 2 and Eucharhead if they proceed; and with which the Appin turbines would be seen at short range and / or alongside as an extension.
- Cumulative visual effects that may arise in terms of aviation lighting, as consented schemes with turbines over 150m are built out, including Windy Standard 3, Fell, Margree; as well as Sanquhar 2 and Eucharhead if they proceed.
- Cumulative visual sequential effects of Appin as a standalone scheme, or in addition to other wind farms visible from the SUW, and on the minor road up the Shinnel Water valley.
- Strategic cumulative landscape effects on wind farm pattern.

Design issues

5.1 Siting and design

5.1.1 Design objectives and key design viewpoints; A design statement should be prepared given the sensitivity of landscape and visual receptors potentially impacted on by this scheme, with a design objective led approach. It is recommended that alternative scenarios of both the wind farm footprint and turbine size are tested through an iterative design process, using comparative ZTVs and wire lines, with turbines numbered, to scope out the extent and ranges of turbine heights avoiding the most harmful effects.

5.1.2 Wind farm layout; The layout of the two approximately parallel arrays of turbines, which would be seen foreshortened and with a high degree of congestion in the typically up-valley views from the sensitive Shinnel Water valley, would give rise to stacking and overlapping of numerous rotors, with consequent visual confusion.

There are a number of more sensitive landscape and visual receptors adjacent to the scheme, and turbines are presently located on or in very close proximity to these: including the Striding Arch Sculptures and distinctive craggy hills which contribute to local amenity. Turbines should be set back from such features, removed or reduced in height; see scale effects below.

5.1.3 Turbine size; The proposed 230m turbines would have potential for least good fit / greatest impacts directly with the receiving landscapes of the Shinnel Water Upland Glen (LCT 10), the Keir Foothills (LCT 18), and the Ken unit of Southern Uplands with Forest (LCT 19a); and indirectly on the neighbouring / nearby Nithsdale Southern Uplands (LCT 19), the Tynron Foothills (LCT 18), and the Dalwhat Water Upland Glen (LCT 10).

The size and proximity of the turbines to the sensitive main Shinnel Water valley and their prominent position around the ridgelines above the valley would be out of scale with the valley.

Specific scale effects are anticipated from individual turbines in relation to other landscape features. For example:

- Turbines are proposed near both the Colt Hill and Bail Hill striding Arches and would interrupt the setting and intervisibility of the sculptures.
- A 230m turbine sited on Croglin Crag, which is a distinctive feature in the Shinnel Valley, and only rises approximately 210m from the adjacent valley floor.
- Markreach Hill is a craggy valley-side feature and should be avoided as a site for a turbine.

There are several other wind farms already going through the planning system and Appin should be sited and designed to fit in terms of the siting and design parameters of the schemes ahead of it in the planning system; or adequately set back / with perceived separation so differences would not cause visual problems from sensitive viewpoints. The consented Lorg turbines are 130m, with some

potentially being revised to 149.9m; the at appeal Sanquhar 2 turbines would be 200m, and in planning Eucharhead would be 230m.

Scenarios of alternative turbine heights should also be tested in these local and wider views. Alternative turbine heights, and specifically below 150m should be tested in relation to receptors that would be sensitive to aviation lighting to avoid / minimize such effects.

Lighting issues

5.2.1 Aviation lighting; The proposed Very Large turbines would require hub height visible aviation lighting, and possibly other lights mid tower.

The effects of any required lighting should be visualized and assessed as set out in 3.1.4. The suggested representative viewpoints for full night time photomontage visualisations are set out in 3.2.3. Any residential properties within 2km of a lit turbine should also be assessed and with visualizations, given night lighting would be a significant change from the existing scenario in these secluded upland glens and valleys, where a dark night sky is a key characteristic.

5.2.2 Mitigation; Alternatives should be explored with respect to potential lighting options. This is an evolving area of technology and practice, but for example variable brightness lighting, and radar activated lighting.

Access and other infrastructure

5.3.1 Access; Access to and within the site should be assessed in terms of impacts; along with the Abnormal Loads Route / options, indicating any requirements in terms of road upgrades at corners, boundary and verge treatments, bridges, tree works and access points etc., along with detail design proposals for these. Photomontage visualisations should show the proposals.

5.3.2 Other infrastructure; Other compounds, substations, site offices, batching plants, borrow pits etc. should be assessed in terms of impacts; indicating any requirements in terms of architectural and engineered structures or ground works, boundary treatments, tree works, proposed screening etc., along with detail design proposals for these. Photomontage visualisations should show the proposals for these elements, where they would be seen from the Representational viewpoints.

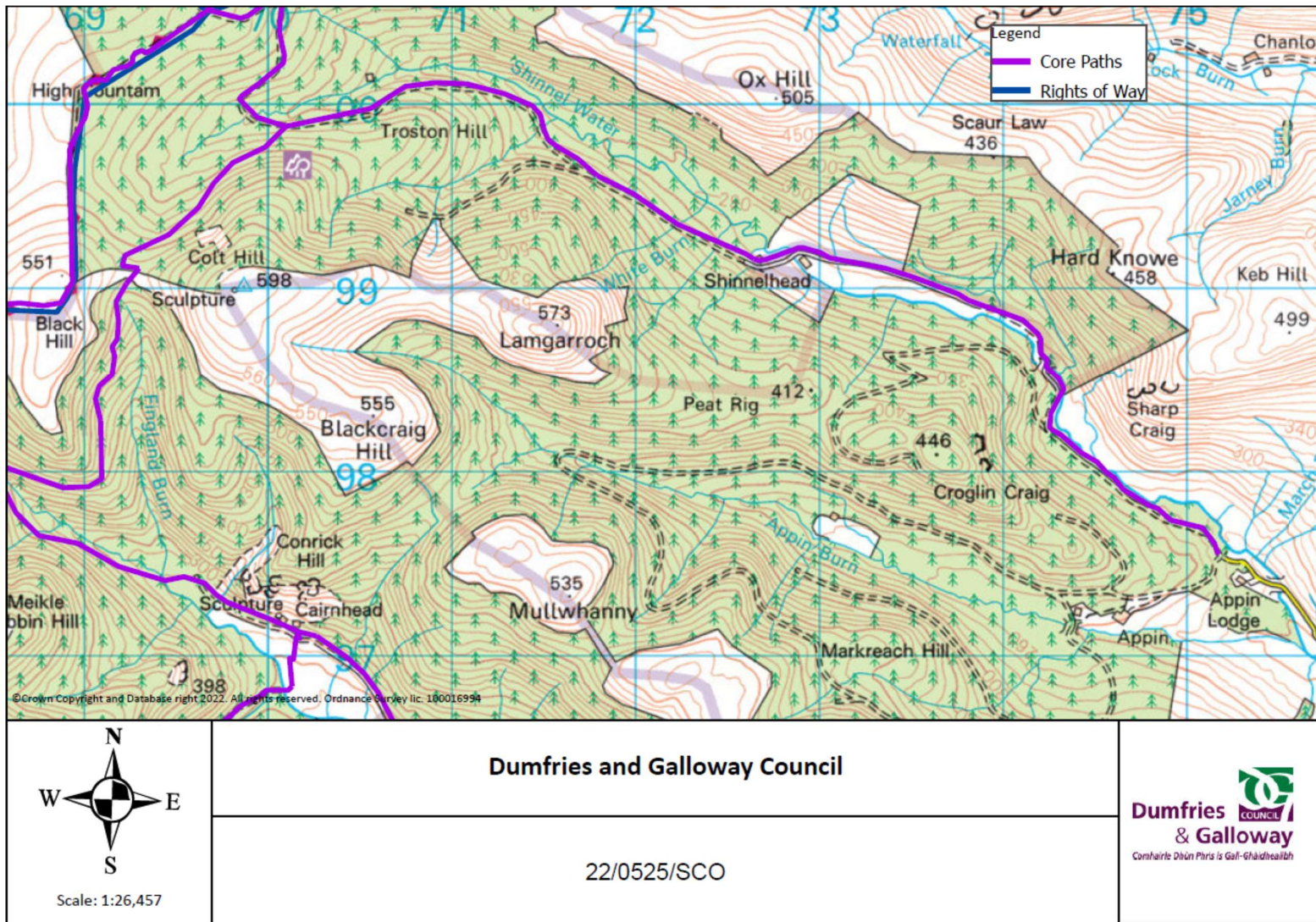
6 Outstanding Responses

6.1 There is still an outstanding response from the Council's Environmental Health Officer and Roads Officer which will be forwarded on to the applicant once it has been received by the Planning Service.

7 Other Matters

7.1 The Council considers that the structure of the scoping report is clear and sets out a prudent approach to the topics that may give rise to significant effects and should be fully examined in the forthcoming EIA Report. Additionally, the topics listed in the report are acceptable to the Council and should be fully assessed within the EIA Report.

Appendix I





By email to: econsents_admin@gov.scot

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

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

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

Our case ID: 300057555
Your ref: ECU00003447
28 April 2022

Dear Scottish Government Energy Consents

[The Electricity Works \(Environmental Impact Assessment\) \(Scotland\) Regulations 2017](#)
[Appin Wind Farm](#)
[EIA Scoping Report](#)

Thank you for your consultation which we received on 25 March 2022 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 a windfarm development of 25 wind turbines, each up to 230m to turbine blade tip plus associated tree felling and ancillary infrastructure. The site is located to the west of Thornhill in Dumfries & Galloway.

Our view on the proposals

We are largely content that there is capacity for wind farm development at this location that can be designed to avoid raising nationally significant issues for our interests, we do however have some comments to make on the Scoping Report which you will find in the Annex.

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://conservation.historic-scotland.gov.uk/>.

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

Yours faithfully

Historic Environment Scotland



ANNEX

EIA Scoping Report (March 2022)

Appendix B contains a list of all designated assets within 10km of the Site that have been identified as having theoretical visibility of the Proposed Development. It also presents which assets have been scoped in and out and why.

According to the applicants' current assessment, six of the seven monuments with theoretical visibility (SM1043, Stroanfreggan Bridge, cairn, SM2238, Craigengillan, cairn, SM633, Capenoch Loch, long cairn, SM13711, Drumlanrig, Roman fort and annexe 400m SE of Drumlanrig Castle, SM699, Maxwelton, motte, SM695, Lower Ingleston, motte and bailey 400m ENE of) have all been scoped out of further assessment. This is because it is thought that due to the screening vegetation there would be no intervisibility between the site and the specific assets and the proposed development.

We have an issue with the methodology used here, as the assessment relies on existing vegetation to screen the proposed development from the assets for our interests.

We would expect for these assets to be assessed whilst using the long-term forest plans for the areas concerned as this is the baseline – the forest plans may include opening clearings or views out from monuments. Vegetation, generally, should not be considered a permanent or suitable mitigating factor. Vegetation is subject to environmental change but also, management change and when clear felled, views will be open.

Visualisations

The proposed visualisations (Table 8.1) are not adequate because the list of the assets to be assessed is not adequate in the first place. Where there is theoretical visibility of the proposed development from an asset for our interest within 10km of the development, best practice would be for the applicants to provide bare earth wireframes in order to provide more certainty in the assessment of potential impacts on the settings of these assets.

We would also recommend that we are given sight of wireframes/visualisations in advance of any EIA Report and planning application at an early stage in the design process so that we can confirm whether assets can be scoped out of detailed assessment or whether mitigation by design to avoid or reduce significant effects will be required.

Cumulative impacts

In light of the other proposed wind farms in the vicinity, attention should also be given to



assessing the cumulative impact of the development on the setting of assets for our interests and this should also be supported by visualisations if significant effects are identified.

Historic Environment Scotland

28 April 2022

**Vicki Bonner**

Energy Consents Unit
The Scottish Government
By email: Econsents_Admin@gov.scot
Cc Victoria.Bonner@gov.scot

21 April 2022
Our ref: CEA166459
Your ref: ECU00003447

Dear Ms Bonner

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

Thank you for consulting us on the above proposal dated 25 March 2022, regarding the scope of the Environmental Impact Assessment (EIA) for the Appin wind farm proposal, in Dumfries and Galloway.

The proposal is for up to approximately 25 turbines, each up to 230 metres in height to blade tip. If the proposal is altered to increase the number of turbines beyond 25, NatureScot should be consulted again. The proposal also includes associated access, infrastructure, borrow pits, and energy storage,

Our comments on the scope of the proposed EIA report (EIAR) are below.

1. General scoping advice

- 1.1. The applicant should consider our [General pre-application and scoping advice for onshore wind farms](#) in addition to any case-specific advice we might provide. This guidance aims to assist developers and consultants involved in preparing applications and EIAs for onshore wind farm developments. It presents our general pre-application and scoping advice, contains links to more detailed guidance, and outlines the type of survey and assessment work that developers may need to undertake to support a wind farm planning application.
- 1.2. All of our current standing advice for planners and developers is also listed [here](#).

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2. Key natural heritage interests requiring consideration within the EIA

- 2.1. Muirkirk and North Lowther Uplands Special Protection Area (SPA) has not been considered as it falls outwith the 10km buffer used in the desk study (20km for sites with qualifying migratory waterfowl). However, peregrine is a qualifying feature of this SPA, with a maximum connectivity range of 18km as per NatureScot guidance, which can be found [here](#). Therefore, we advise that Muirkirk and North Lowther Uplands SPA should be included within the EIAR, and the reference to the 10km buffer removed.
- 2.2. Muirkirk and North Lowther Uplands SPA should be included within the Habitat Regulations Appraisal (HRA), albeit with low/negligible impact.
- 2.3. A standalone HRA document should be appended to the EIAR. The rationale provided within the Scoping document is valid, but this does not negate the need for a formal HRA document. Both Muirkirk and North Lowther Uplands SPA and Loch Ken and River Dee Marshes SPA should be included within the HRA.
- 2.4. We advise that all SPAs within 20km should be included in the EIAR and HRA, as this would clear up confusion within Figure 7.1 and paragraph 7.57, which fail to mention that there are other SPAs within 20km but without migratory waterfowl.
- 2.5. Barn owl should not be scoped out; as stated in paragraph 7.22, there will be design considerations for this species and therefore the species should be included in any assessment of the project.
- 2.6. In general, any works should take account of protected species that may be present within the proposed development area. Survey guidance, mitigation and licensing advice is [available on the NatureScot website](#).
- 2.7. The peat survey provided shows that 43 out of 619 probes returned peat depths of 50cm or greater. Peat in the Scottish soil classification is soil with more than 60% organic carbon and exceeding 50cm in thickness. The Scoping report mentions avoiding areas of peat deeper than 1 metre; however, we advise that the Proposed Development avoids areas of peat which exceed 50cm in thickness.
- 2.8. As this development involves forestry activities in close proximity to watercourses, we advise that the Proposed Development adhere to the [UK Forestry Standard Forests and Water guidelines](#).
- 2.9. We advise that a Pollution Prevention Plan be put in place, particularly to manage the risk of sedimentation and chemical pollution to the watercourses and peat found on and around the Proposed Development site.

- 2.10. While there is considerable development already proposed within this area, we highlight the location of this development directly next to the striding arches sculpture on Colt Hill. Turbines from the 'in application' Eucharhead are also proposed adjacent to this sculpture. The diminution of the scale or prominence of the sculpture and the potential detracting from the sculpture's hilltop location should be addressed as part of the assessment. Access and the visual /physical connection to the four sculptures is an important part of their location as well as the difficulties in accessing, particularly, the sculpture on Bail hill and the circular route linking them.

Response to client questions on Landscape and Visual Amenity (numbered as per Scoping report Appendix C)

- 4.1. We largely agree with the aspects that are to be scoped out.
- 4.2. See response to 4.5. below.
- 4.3. No comment.
- 4.5. We request that a viewpoint from Moniaive be considered, perhaps on the A702 where the greatest visibility appears, or on the minor road along the Dalwhat Water – Accepting that there is tree cover and it may require a bit of micro siting. If a suitable location can be found, this could also double as a night time viewpoint, given that we think Moniaive would be the closest settlement to the development.

A viewpoint representative of Thornhill would also be requested as large amounts of the proposal look theoretically visible from here – again subject to micro siting/actual visibility.

- 4.6. No comment.

Response to client questions on Ornithology (numbered as per Scoping report Appendix C)

- 7.1. The range of desk study sources and ornithology surveys considered to inform the design and assessment of the Proposed Development is appropriate.
- 7.2. The full range of likely effects to be assessed within the EIA report has not been adequately identified. One additional impact pathway during operation is proposed below:

During the lifetime of the proposed development there is likely to be forestry operations including felling. Consideration should be given to the increase of

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potential suitable habitat to breeding birds within any felled areas. Measures should be proposed to reduce habitat suitability within clear fell areas to reduce any increased risk to birds.

- 7.3. We do not believe additional consultees are required.
- 7.4. As stated above, Barn Owl should not be scoped out. In addition, a HRA is to be included, as are all SPAs within 20km of the proposed development. Both Pink-footed Goose and Greylag Goose should not be scoped out and should be included within the EIAR, albeit with low/negligible impact.
- 7.5. The proposed scope (all sites >3 turbines within 20km of the site) is appropriate.

Concluding remarks

The advice in this letter is provided by NatureScot, the operating name of Scottish Natural Heritage.

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

Yours sincerely,

Cameron Singh-Johnstone
Trainee Operations Officer
Southern Scotland Unit



Vicki Bonner
Consents Caseworker
Energy Consents Unit
The Scottish Government

SEPA email contact:
TEAM EMAIL

14 April 2022

By email only to: Econsents_Admin@gov.scot

Dear Vicki

Electricity Act 1989 - Section 36
Planning Application: ECU00003447
Appin Wind Farm - 25 wind turbines up to 230m to turbine blade tip
Appin Wind Farm?
SEPA Reference: 4793

Thank you for consulting SEPA on the scoping opinion for the above development proposal by your email received on 25 March 2022.

Advice to the planning authority/determining authority

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

- a) Map and assessment of all engineering works within and near the water environment including buffers, details of any flood risk assessment and details of any related CAR applications.
- b) Map and assessment of impacts upon Groundwater Dependent Terrestrial Ecosystems and buffers.

- c) Map and assessment of impacts upon groundwater abstractions and buffers.
- d) Peat depth survey and table detailing re-use proposals.
- e) Map and table detailing forest removal.
- f) Map and site layout of borrow pits.
- g) Schedule of mitigation including pollution prevention measures.
- h) Borrow Pit Site Management Plan of pollution prevention measures.
- i) Map of proposed waste water drainage layout.
- j) Map of proposed surface water drainage layout.
- k) Map of proposed water abstractions including details of the proposed operating regime.
- l) Decommissioning statement.

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

1. **Site specific comments**

- We class deep peat as being over 1m and peat probing indicates that only 2.1% of the total area is deep peat, we would therefore expect the applicant to demonstrate they have fully avoided areas of peat deeper than 1m.
- Class 1 and 2 peat areas should have no infrastructure placed on them.
- Within the main application we would expect to see a peat depth map with infrastructure overlain.
- Should any infrastructure be proposed for the areas than have no information of peat depths this should be updated to inform a full Peat Management plan.
- Given the number of watercourses in the area, all feeding the Shinnel Water and concerns raised over steep slopes we would expect robust pollution prevention mitigation to be provided and water quality monitoring to be in place.
- Should felling be required for infrastructure we would ask the recently felled areas are surveyed for GWDTE's and specifically flushes and springs, and if found, these areas should be demarked and avoided.
- Applicant should make as much use of existing tracks as feasible.

Regulatory advice for the applicant

2. **Regulatory requirements**

- 2.1. Proposed engineering works within the water environment will require authorisation under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Management of surplus peat or soils may require an exemption under The Waste Management Licensing (Scotland) Regulations 2011. Proposed crushing or screening will

require a permit under The Pollution Prevention and Control (Scotland) Regulations 2012. Consider if other environmental licences may be required for any installations or processes.

- 2.2. Details of regulatory requirements and good practice advice for the applicant can be found on the [Regulations section](#) of 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 me by telephone on insert contact number or e-mail at insert area planning office e-mail.

Yours sincerely

Silvia Cagnoni
Senior Planning Officer

ECopy to: Victoria.Bonner@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](#).

Appendix 1: Detailed scoping requirements

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

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

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

1. Site layout

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

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

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

- 2.4. Refer to our flood risk [Standing Advice](#) for advice on flood risk. Watercourse crossings must be designed to accommodate the 0.5% Annual Exceedance Probability (AEP) flows, or information provided to justify smaller structures. If it is thought that the development could result in an increased risk of flooding to a nearby receptor then a Flood Risk Assessment must be submitted in support of the planning application. Our [Technical flood risk guidance for stakeholders](#) outlines the information we require to be submitted as part of a Flood Risk Assessment. Please also refer to Controlled Activities Regulations (CAR) Flood Risk Standing Advice for Engineering, Discharge and Impoundment Activities.

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

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

4. Disruption to Groundwater Dependent Terrestrial Ecosystems (GWDTE)

- 4.1. GWDTE are protected under the Water Framework Directive and therefore the layout and design of the development must avoid impact on such areas. The following information must be included in the submission:
- a) A map demonstrating that all GWDTE are outwith a 100m radius of all excavations shallower than 1m and outwith 250m of all excavations deeper than 1m and proposed groundwater abstractions. If micro-siting is to be considered as a mitigation measure the distance of survey needs to be extended by the proposed maximum extent of micro-siting. The survey needs to extend beyond the site boundary where the distances require it.
 - b) If the minimum buffers above cannot be achieved, a detailed site specific qualitative and/or quantitative risk assessment will be required. We are likely to seek conditions securing appropriate mitigation for all GWDTE affected.
- 4.2. Please refer to [Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems](#) for further advice and the minimum information we require to be submitted.

5. Existing groundwater abstractions

- 5.1. Excavations and other construction works can disrupt groundwater flow and impact on existing groundwater abstractions. The submission must include:
- a) A map demonstrating that all existing groundwater abstractions are outwith a 100m radius of all excavations shallower than 1m and outwith 250m of all excavations deeper than 1m and proposed groundwater abstractions. If micro-siting is to be considered as a mitigation measure the distance of survey needs to be extended by the proposed maximum extent of micro-siting. The survey needs to extend beyond the site boundary where the distances require it.
 - b) If the minimum buffers above cannot be achieved, a detailed site specific qualitative and/or quantitative risk assessment will be required. We are likely to seek conditions securing appropriate mitigation for all existing groundwater abstractions affected.
- 5.2. Please refer to [Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems](#) for further advice on the minimum information we require to be submitted.

6. Forest removal and forest waste

- 6.1. Key holing must be used wherever possible as large scale felling can result in large amounts of waste material and in a peak release of nutrients which can affect local water quality. The supporting information should refer to the current Forest Plan if one exists and measures should comply with the Plan where possible.
- 6.2. Clear felling may be acceptable only in cases where planting took place on deep peat and it is proposed through a Habitat Management Plan to reinstate peat-forming habitats. The submission must include:
- a) A map demarcating the areas to be subject to different felling techniques.

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

7. Borrow pits

- 7.1. Scottish Planning Policy states (Paragraph 243) that “Borrow pits should only be permitted if there are significant environmental or economic benefits compared to obtaining material from local quarries, they are time-limited; tied to a particular project and appropriate reclamation measures are in place.” The submission must provide sufficient information to address this policy statement.
- 7.2. In accordance with Paragraphs 52 to 57 of Planning Advice Note 50 Controlling the Environmental Effects of Surface Mineral Workings (PAN 50) a Site Management Plan should be submitted in support of any application.
- 7.3. The following information should also be submitted for each borrow pit:
 - a) A map showing the location, size, depths and dimensions.
 - b) A map showing any stocks of rock, overburden, soils and temporary and permanent infrastructure including tracks, buildings, oil storage, pipes and drainage, overlain with all lochs and watercourses to a distance of 250 metres. You need to demonstrate that a site specific proportionate buffer can be achieved. On this map, a site-specific buffer must be drawn around each loch or watercourse proportionate to the depth of excavations and at least 10m from access tracks. If this minimum buffer cannot be achieved each breach must be numbered on a plan with an associated photograph of the location, dimensions of the loch or watercourse, drawings of what is proposed in terms of engineering works.
 - c) You need to provide a justification for the proposed location of borrow pits and evidence of the suitability of the material to be excavated for the proposed use, including any risk of pollution caused by degradation of the rock.
 - d) A ground investigation report giving existing seasonally highest water table including sections showing the maximum area, depth and profile of working in relation to the water table.
 - e) A site map showing cut-off drains, silt management devices and settlement lagoons to manage surface water and dewatering discharge. Cut-off drains must be installed to maximise diversion of water from entering quarry works.
 - f) A site map showing proposed water abstractions with details of the volumes and timings of abstractions.
 - g) A site map showing the location of pollution prevention measures such as spill kits, oil interceptors, drainage associated with welfare facilities, recycling and bin storage and

vehicle washing areas. The drawing notes should include a commitment to check these daily.

- h) A site map showing where soils and overburden will be stored including details of the heights and dimensions of each store, how long the material will be stored for and how soils will be kept fit for restoration purposes. Where the development will result in the disturbance of peat or other carbon rich soils then the submission must also include a detailed map of peat depths (this must be to full depth and follow the survey requirement of the Scottish Government's Guidance on [Developments on Peatland - Peatland Survey \(2017\)](#)) with all the built elements and excavation areas overlain so it can clearly be seen how the development minimises disturbance of peat and the consequential release of CO₂.
- i) Sections and plans detailing how restoration will be progressed including the phasing, profiles, depths and types of material to be used.
- j) Details of how the rock will be processed in order to produce a grade of rock that will not cause siltation problems during its end use on tracks, trenches and other hardstanding.

8. Pollution prevention and environmental management

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

9. Life extension, repowering and decommissioning

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

From: radionetworkprotection@bt.com
To: [Bonner V \(Victoria\)](#)
Cc: [Keyes K \(Kirstin\)](#)
Subject: RE: Request for Scoping Opinion Appin Wind Farm WID11798
Date: 05 April 2022 12:15:46
Attachments: [image002.png](#)
[image004.png](#)
[FIG3_2_11634_r1_PrpsdDv.pdf](#)



OUR REF: WID11798

Thank you for your email dated 25/03/2022.

We have studied this proposal using the attached location plan, 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.

Regards

Lisa Smith

Engineering Services – Radio Planner
Networks



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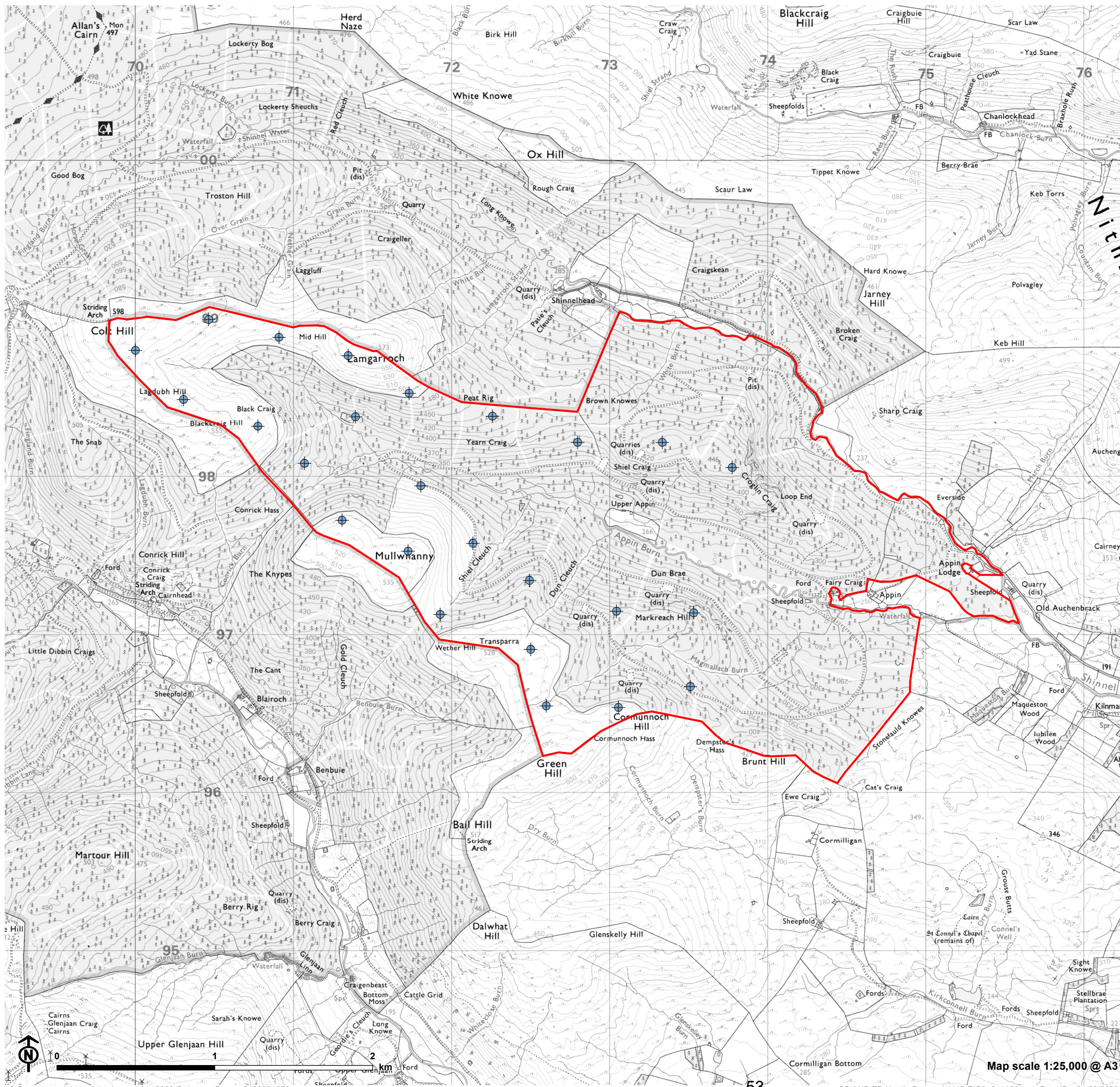
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British Telecommunications plc

One Braham 1 Braham Street London E1 8EE

Registered in England: No 1800000

Figure 3.2: Proposed Development (Scoping Layout)



-  Turbines (Scoping Layout)
-  Site boundary

From: [Mike Steele](#)
To: [Econsents Admin](#)
Cc: [Mike Steele](#)
Subject: Appin Wind Farm ECU0003447
Date: 17 April 2022 10:13:04

The Energy Consents Unit website will not allow me to leave an online comment so can this please be added to the representations

[Appin Wind Farm ECU00003447](#)

-

I write on behalf of Closeburn Community Council, Dumfries & Galloway.

We would like to express concerns regarding this application because:

Turbine numbers (25) and height (690') are inconsistent with local and surrounding landscape. They are much taller than current turbines in the area and will thus be seen over a larger area and thus have a larger visual impact for a longer distance around the site. This is exacerbated by being on the top of a hill of 500'.

From Closeburn they will be seen to merge with current windfarms to form a larger block of turbines

They will have a negative impact on the Thornhill Uplands Regional Scenic Area.

If aviation lights are required, they will have a negative effect on the Dark Skies region of Dumfries & Galloway

Mike Steele
Community Councillor
Auchencairn Cottage Closeburn
Thornhill
DG3 5JU

Regards,

Mike

From: [Olivia Morrad](#)
To: [Bonner V \(Victoria\)](#)
Subject: 20220504 Appin Wind Farm, Email to GovScot
Date: 04 May 2022 15:41:04
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

Olivia Morrad
Assistant Portfolio Co-ordinator
Crown Estate Scotland

t: 0131 376 1506

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

Teena Oulaghan
Ministry of Defence
Safeguarding Department
St George's House
DIO Headquarters
DMS Whittington
Lichfield
Staffordshire
WS14 9PY

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

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

Application Ref: ECU00003447
Our Reference: DIO10054723

11 May 2022

Dear Vicki,

Site Name Appin Wind Farm

Site Address Approximately 12.5km to the west of Thornhill within Dumfries and Galloway.

Proposal Electricity Act 1989 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. Request for scoping opinion for proposed Section 36 Application for Appin Wind Farm.

Thank you for consulting the Ministry of Defence (MOD) on the above request for a Scoping Opinion for the proposed construction and operation of Appin wind farm which was received by our office on 25 March 2022.

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 inform you that the MOD has concerns about this proposed development.

We have assessed this proposal on the basis that there will be 25 turbines at 230.00 metres in height from ground level to blade tip and located at the grid references detailed in the table below:

Turbine	Easting	Northing
1	272600	596550
2	270305	598490
3	271348	598768
4	271726	597531
5	271930	597130
6	270776	598321
7	270465	598993
8	272504	596910
9	271310	597725
10	271732	598529

11	271069	598086
12	273058	596542
13	273045	597151
14	272259	598382
15	272799	598220
16	273336	598218
17	273778	598061
18	273533	597142
19	270000	598800
20	270908	598883
21	271807	597945
22	272136	597583
23	272495	597347
24	273512	596676
25	271394	598381

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

Military Low Flying Training

In this case the proposed development falls within Tactical Training Area 20T (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. Therefore, in the interests of air safety, the MOD would request that the development be fitted with MOD accredited aviation safety lighting in accordance with the requirements of the Air Navigation Order 2016.

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

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

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

Yours sincerely

Teena Oulaghan
Safeguarding Manager

Depute Chief Executive: Katie Kelly



Head of Economic Growth: David McDowall

Direct Dial: 01563 554592

Email: david.mcdowall@east-ayrshire.gov.uk

Direct Dial: Please email

Email: Alison.o'kane@east-ayrshire.gov.uk

Date: 14 April 2022

Dear Sir/Madam,

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

APPIN WIND FARM SCOPING REPORT – EAST AYRSHIRE COUNCIL RESPONSE

Thank you for consulting with East Ayrshire Council on the above scoping request for the proposed Appin Wind Farm, comprising of up to 25 turbines to the South of Sanquhar. It is noted that the application site is entirely within Dumfries and Galloway, sitting approximately 6 km from the East Ayrshire boundary at the nearest point.

The scoping report and associated maps have been reviewed, limited to any implications for East Ayrshire. In general terms, the Council is content with what has been set out within the scoping report. The following comments are however offered:

- The approach to the Landscape and Visual Impact Assessment is considered to be generally appropriate. It is however suggested that consideration be given to adding an additional viewpoint at Blackcraig Hill within the Southern Uplands Landscape Character Type. Blackcraig Hill is a popular hill for recreation and would offer a good illustration of any impact on the East Ayrshire Sensitive Landscape Area. The ZTV shows that a high proportion of the turbines will be visible at tip and hub height from Blackcraig. For completeness, it is considered it would be a sensible addition to the viewpoints suggested.
- The Galloway and Southern Ayrshire UNESCO Biosphere is a unique and important designation for South West Scotland. It is a cross-boundary designation, which allows for policies and actions to be considered across a strategic scale and it is supported through the LDPs of each of the relevant local authorities (Dumfries and Galloway, East Ayrshire and South Ayrshire). The UNESCO designation is important for the tourism draw of the area. As the proposed site sits within the transition area of the Biosphere, it is surprising that no consideration has been given to the designation, particularly within the socio-economic section of the scoping report. It is suggested that the EIA process should take account of and consider how the proposal supports or otherwise the overall principles of the Biosphere designation.
- It is noted at paragraph 4.22 that more detailed consultation will be carried out with NatureScot and the relevant planning authorities to agree the scope of the cumulative assessment. The Council is happy to provide additional advice when suitable, acknowledging the evolving picture of applications and consents.

Should you require any further information on the points raised above or wish to discuss any matter, then please contact Alison O'Kane at alison.o'kane@east-ayrshire.gov.uk

Yours sincerely

Karen Purves
Principal Planning Officer

From: [Safe Guarding](#)
To: [Econsents Admin](#); [Bonner V \(Victoria\)](#)
Cc: [Safe Guarding](#)
Subject: ECU00003447 -Appin Wind Farm
Date: 04 April 2022 14:34:37
Attachments: [image001.png](#)

Good afternoon,

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




Our values

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

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From: [Brian Davidson](#)
To: [Bonner V \(Victoria\)](#)
Cc: [James Henderson \(board@river-nith.com\)](#); [Debbie Parke \(trust@river-nith.com\)](#)
Subject: RE: Request for Scoping Opinion Appin Wind Farm
Date: 15 April 2022 16:48:43
Attachments: [image001.png](#)

Dear Victoria,

Thank you for your correspondence concerning Appin Wind Farm.

Fisheries Management Scotland (FMS) represents the network of 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 network of 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 catchment relating to the Nith DSFB and the Nith Catchment Fisheries Trust. It is important that the proposals are conducted in full consultation with the local DSFB & Trust (see link to FMS member DSFBs and Trusts below). We have also copied this response to both 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 DSFB & TRUST 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



Victoria Bonner
Consents Caseworker
Energy Consents Unit
The Scottish Government

8th April 2022

Dear Ms Bonner

Appin Wind Farm Scoping Response - ECU reference: ECU00003447

I am writing further to your correspondence relating to the above wind farm. The Nith Catchment Fishery Trust have received a copy of the Nith District Salmon Fishery Board's response to you on this subject. We agree the terms of the NDSFB response and support that response. Further to those comments, we consider that it would be appropriate to conduct Fresh Water Pearl Mussel surveys in the watercourses which could potentially be impacted by the Appin proposed wind farm. Nith Catchment Fishery Trust have conducted many freshwater pearl mussel surveys in relation to wind farm proposals within the River Nith catchment and consider these to be an important element of aquatic sampling.

We would require detailed aquatic monitoring plans to be agreed prior to this development progressing any further.

Yours sincerely,

Debbie Parke
Operations Manager and Fishery Biologist

Nith Catchment Fishery Trust
37 George Street, Dumfries, DG1 1EB
Tel: 01387 740 043 Email: trust@river-nith.com www.river-nith.com

Nith Catchment Fishery Trust is a Registered Scottish Charity. Charity no. SC040908.
Company no. SC366067. Registered Office: 37 George Street, Dumfries, DG1 1EB. Registered in Scotland

Chairman: Percy Weatherall
Clerk: Roderick R Styles
Director: James Henderson



Victoria Bonner
Consents Caseworker
Energy Consents Unit
The Scottish Government

7th April 2022

Dear Ms Bonner

Appin Wind Farm Scoping Response - ECU reference: ECU00003447

I write in response to the request for scoping opinion for the proposed Section 36 application for Appin Wind Farm, ECU reference: ECU00003447.

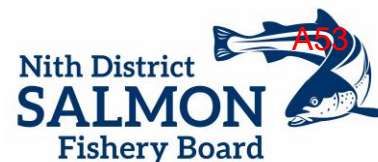
I am responding on behalf of Nith District Salmon Fishery Board (NDSFB), the statutory body responsible for the management of migratory salmonid species of fish within the River Nith catchment. NDSFB considers all planning matters relating to the River Nith catchment.

As with all wind farm developments it will be necessary to instate road infrastructure to construct the wind farm and to maintain it, in the future. The associated drainage works and watercourse crossings involved with road construction in upland habitats like Appin can prove detrimental to salmonid and other species of fish and the aquatic environment generally. Having read the EIA scoping report relating to this proposed development, I note the mention of fish briefly in Section 6 of the report and I understand that a walk over survey of fish habitats has been conducted. I also note in Section 6.30 of the report, that "It is considered that further detailed fish surveys to inform an assessment of effects upon fisheries will not be required". NDSFB considers that it is unacceptable for the developers of this scheme to state that they will avoid potential adverse impacts in the aquatic environment by adapting their plans and proposals and thus not require to assess the aquatic environment and its species accurately. NDSFB strongly object to this statement on the grounds that a walk over survey merely provides information relating to the potential for fish to be present. It does not provide factual information on species population densities and distribution or the species that fish rely on for their survival.

NDSFB have extensive knowledge of working with large scale construction projects and their potential impacts on the aquatic environment and the species residing within. Our Board has worked on every wind farm within the River Nith catchment and whilst a walk over survey conveys the potential for fish to be present, it is no substitute for an electrofishing survey which provides actual data which can be measured and compared with future surveys.

NDSFB consider that the Scottish Government guidelines for onshore wind farm developments and fish, to be comprehensive and appropriate and have sought to implement their criteria on all wind farm developments within the River Nith catchment. Please see following link to Scottish Governments guidelines - [Freshwater and diadromous fish and fisheries associated with onshore wind farm and transmission line developments: generic scoping guidelines - gov.scot \(www.gov.scot\)](#). NDSFB has some archive electrofishing data for watercourses located in or within the potential zone of influence of the proposed Appin Wind Farm site. We can confirm that salmonid species of fish are present and accordingly our Board will require a full suite of aquatic surveys be carried out to include fish, aquatic macro invertebrates and invasive species. This suite of aquatic surveys

Chairman: Percy Weatherall
Clerk: Roderick R Styles
Director: James Henderson



should be conducted prior to any construction taking place, thus providing information on the status of the aquatic environment and guiding appropriate mitigation to be applied during construction. All aquatic surveys must be repeated annually during the construction phase and repeated post construction to allow for an assessment to be made of any potential impacts. Indeed, as with other wind farm developments within the Nith catchment, an appropriate “fish monitoring plan” forms part of the planning conditions.

NDSFB spends considerable sums of money managing the resource that it is statutorily responsible for, Atlantic Salmon and sea trout. Despite our best efforts, populations of both these species are in dramatic decline across their entire northern range. The Scottish Government has acknowledged that Atlantic Salmon are “in crisis” and accordingly our Board are concerned about any construction activity occurring within NDSFB’s jurisdiction with the potential to impact adversely on the resource. NDSFB is not against development provided it is accompanied by a mechanism to accurately assess any potential impacts on the aquatic environment. Indeed, previous development has occurred within the Shinnel catchment where this ethos has applied.

For the avoidance of doubt, NDSFB object to the proposal relating to Appin wind farm on the grounds that there is insufficient commitment within the scoping report to gather information on the species that our Board is statutorily responsible for.

Yours sincerely

James Henderson

Director



By email only

The Scottish Government
 Energy Consents Unit
 5 Atlantic Quay
 150 Broomielaw
 Glasgow
 G2 8LU
 FAO: Vicki Bonner

26 April 2022

Dear Vicki

Glasgow Prestwick Airport

ELECTRICITY ACT 1989

**THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND)
 REGULATIONS 2017 - REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36
 APPLICATION FOR Appin Wind Farm**

Glasgow Prestwick Airport Ltd ("the Airport") has reviewed the reviewed the scoping consultation documents available on the Energy Consents Unit portal for the proposed Appin Windfarm (**ECU00003447**).

The Airport respond here to the Appin Windfarm Scoping Report purely on aviation matters.

The Airport's Safeguarding Assessment Process

1. In aviation, safety in the air is paramount. That being the case, the Airport has considered the proposal in line with its Safeguarding Assessment Process. The steps of that process are to be undertaken to ensure that the Airport meets the requirements imposed upon it through the Civil Aviation Publications ("CAPs") which are promulgated by the Airport's regulator, the Civil Aviation Authority ("CAA").

Glasgow Prestwick Airport Ltd

Aviation House, Prestwick, Ayrshire, Scotland, KA9 2PL

T: +44 (0)1292 511055 M: +44 (0)79905 51141 E: sthompson@glasgowprestwick.com
 www.glasgowprestwick.com

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The Airport's preliminary Safeguarding Assessment Process has identified potential adverse effects on the Airport's Primary Surveillance Radar (PSR), the Secondary Surveillance Radar (SSR) service it receives from NATS Lowther Hill radar, its published Instrument Flight Procedures (IFP's), its Runway 30 Instrument Landing System (ILS) and its VHF Ground to Air Communication Equipment performance in the vicinity of the proposed Appin Windfarm.

These issues having been identified, will require the Airport to conduct further assessment work on these key Communications, Navigation and Surveillance Systems (CNS) equipment(s) in conjunction with the Developer and subsequently conduct a full Air Traffic Control (ATC) Operational Impact Assessment which is provided for in the Airport's Safeguarding Assessment Process.

Aviation Lighting

2. The Airport note there will be a detailed design to address the aviation warning obstruction lighting scheme as required by UK CAA for obstacles greater than 150m in height above local ground level in accordance with Article 222 of the UK Air Navigation Order (ANO) 2016.

The Airport note that while solely a matter for the CAA to consider, should the final aviation lighting scheme consider the use of Aircraft Detection Lighting System (ADLS) dependent upon Electronic Conspicuity (EC) Equipment(s) and be part of any alternate proposed lighting scheme, the Airport respectfully request to be consulted with.

Primary Surveillance Radar (PSR)

3. Preliminary Radar Line of Sight (LOS) analysis at the proposed maximum turbine tip heights of 230m for the Appin Windfarm – indicates that there is the potential that some of the proposed turbines would be visible to the Airports primary surveillance radars.

It will be necessary for further detailed radar modelling assessments/flight trials be undertaken to confirm the exact number of turbines visible to the Airport's primary radars and whether the clutter and other degradative effects resulting (ie shadowing, loss of base of radar cover, etc) from the

Glasgow Prestwick Airport Ltd

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www.glasgowprestwick.com

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visible turbines can be mitigated for the lifetime of the windfarm via an appropriate radar technology solution and associated mitigation agreement.

Instrument Flight Procedures (IFP's)

4. Furthermore, given the proposed maximum tip height (230m) of the turbines, we also request that the Developer engages with the Airport to agree who undertakes the IFP Assessment to establish fully if the proposed development is likely to have any impact on our published Instrument Flight Procedures (IFP's) – both the conventional and RNAV/RNP published IFP's as published in the UK Aeronautical Information Publication (AIP) for Glasgow Prestwick Airport (EGPK).

Technical Safeguarding (Preliminary) – Instrument Landing System (ILS) and VHF Communication Equipment(s)

5. Preliminary analysis indicates it may also be necessary to conduct a detailed Technical Safeguarding Assessment in respect of the protection of the Airport's Runway 30 Instrument Landing System (ILS) and VHF Ground to Air Radio Navigation Equipment(s) performance in the vicinity of the proposed Appin windfarm.

These concerns will require to be considered as part of the overall full Technical Safeguarding Assessment as part of further discussions with the Developer.

Secondary Surveillance Radar (SSR)

6. The Airport also has concerns that the cumulative impact and proliferation of windfarms in the vicinity of this proposed development may have an impact on the low level coverage that the Airport currently enjoys from the SSR data feed it receives from the NATS Lowther Hill SSR.

These concerns will require to be considered as part of the overall full Technical Safeguarding Assessment as part of further discussions with the Developer.

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ATC Operational Impact Assessment (Preliminary)

7. A preliminary ATC Operational Assessment indicates that while this proposed development lies outwith Glasgow Prestwick Airport's Controlled Airspace and in an area where the Airport's ATC regularly provide an air traffic service, and as such if some of the turbines are confirmed visible to the Airport's primary surveillance radar then mitigation will be required, together with a review of any impact on our flight procedures or aeronautical charts as published in the UK Aeronautical Information Publication (AIP) for Glasgow Prestwick Airport (EGPK).

Cumulative Impact

8. The Airport also raises concerns in respect of the cumulative impact, due to other operational, consented and proposed windfarms in the vicinity of the proposed Appin Windfarm and the impact that this cumulative proliferation of windfarms may have on the Airport's Communications, Navigation and Surveillance (CNS) equipment(s), together with the potential for ATC operational impact in having such a cluster of windfarms in the vicinity of the aerodrome in an area of airspace that is operationally significant to ATC.

Conclusions

9. In response to the specific aviation question in the applicants EIA Scoping Report (Q12.1), the Airport believe the scope of the Aviation Assessment Section of the full Environmental Impact Assessment (EIA) for the proposed Appin Windfarm needs to fully consider the points raised in sections 2) to 8) above - specifically for Glasgow Prestwick Airport.
10. In line with CAP764 – '*Policy & Guideline on Wind Farms*', the Airport has welcomed the early dialogue and engagement with the Developer in a collaborative effort to address the aviation concerns raised above – which will allow a full ATC Operational Impact Assessment to be conducted against the proposed development, together with a full Technical Safeguarding Assessment against all Communications, Navigation and Surveillance (CNS) equipment(s) installed at the Airport.

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11. Consequently, until such times as the aviation safety matters as detailed above are appropriately addressed, should the proposed Appin Windfarm come forward as a full Section 36 Planning Application, it is likely that the Airport would be minded to **object** to the development.

Yours faithfully

Steve Thomson
Manager Air Traffic Services
For and on behalf of Glasgow Prestwick Airport Limited

Glasgow Prestwick Airport Ltd
Aviation House, Prestwick, Ayrshire, Scotland, KA9 2PL

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From: [JRC Windfarm Coordinations](#)
To: [Bonner V \(Victoria\)](#)
Cc: [Sarah Miller](#); [ScotlandGas Networks](#); [Scottish Power](#)
Subject: Appin Wind Farm - Request for Scoping Opinion [WF106221]
Date: 12 April 2022 09:52:17

Dear victoria,

A Windfarms Team member has replied to your co-ordination request, reference **WF106221** with the following response:

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 Victoria,

Site Name: Appin Wind Farm

Turbine at NGR:

Easting	Northing	Turbine_No
272600	596550	1
270305	598490	2
271348	598768	3
271726	597531	4
271930	597130	5
270776	598321	6
270465	598993	7
272504	596910	8
271310	597725	9
271732	598529	10
271069	598086	11
273058	596542	12
273045	597151	13
272259	598382	14
272799	598220	15
273336	598218	16
273778	598061	17
273533	597142	18
270000	598800	19
270908	598883	20
271807	597945	21
272136	597583	22

272495 597347 23
273512 596676 24
271394 598381 25

Max Tip Height (from scoping documents): 230m

Working Hub Height: 150m

Working Rotor Radius: 80m

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

Scottish Power and Scotia Gas Networks

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

In the case of this proposed wind energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. However, if any details of the wind farm change, particularly the disposition or scale of any turbine(s), it will be necessary to re-evaluate the proposal. Please note that due to the large number of adjacent radio links in this vicinity, which have been taken into account, clearance is given specifically for a location within the declared grid reference (quoted above).

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, you are advised to seek re-coordination prior to submitting a planning application, as this will negate the possibility of an objection being raised at that time as a consequence of any links assigned between your enquiry and the finalisation of your project.

JRC offers a range of radio planning and analysis services. If you require any assistance, please contact us by phone or email.

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

From: [NATS Safeguarding](#)
To: [Econsents Admin](#)
Cc: [Keyes K \(Kirstin\)](#); [Bonner V \(Victoria\)](#)
Subject: RE: Request for Scoping Opinion Appin Wind Farm [SG33091]
Date: 11 April 2022 10:09:49
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[SG33091 Appin Wind Farm - TOPA Issue 1.pdf](#)

Our Ref: SG33091

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 SG33091.

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 Appin Wind Farm Development

NATS ref: SG33091

Scottish Government ref: ECU00003447

Issue 1

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Publication History

Issue	Month/Year	Change Requests and summary
1	April 2022	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 Appin 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	Hub Height (m)	Tip Height (m)
1	55.2661	-4.0476	269993	598789	0	230
2	55.2680	-4.0404	270455	598989	0	230
3	55.2670	-4.0334	270894	598872	0	230
4	55.2662	-4.0265	271334	598767	0	230
5	55.2641	-4.0202	271724	598522	0	230
6	55.2633	-4.0427	270293	598478	0	230
7	55.2620	-4.0353	270761	598311	0	230
8	55.2626	-4.0256	271378	598367	0	230
9	55.2629	-4.0118	272252	598372	0	230
10	55.2599	-4.0305	271056	598072	0	230
11	55.2616	-4.0032	272798	598211	0	230
12	55.2617	-3.9949	273327	598211	0	230
13	55.2603	-3.9878	273772	598044	0	230
14	55.2589	-4.0188	271796	597939	0	230
15	55.2567	-4.0266	271295	597711	0	230
16	55.2550	-4.0199	271712	597511	0	230
17	55.2515	-4.0165	271918	597117	0	230
18	55.2556	-4.0133	272135	597561	0	230
19	55.2537	-4.0077	272486	597339	0	230
20	55.2520	-3.9988	273043	597139	0	230
21	55.2521	-3.9912	273532	597133	0	230
22	55.2497	-4.0074	272492	596900	0	230
23	55.2466	-4.0056	272597	596544	0	230
24	55.2467	-3.9984	273054	596544	0	230
25	55.2479	-3.9913	273510	596661	0	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
Clee Hill Radar	52.3983	-2.5975	178.2	330.1	344.2	CMB
Great Dun Fell Radar	54.6841	-2.4509	63.1	116.9	303.2	CMB
Lowther Hill Radar	55.3778	-3.7530	10.7	19.8	231.4	CMB
Perwinnes Radar	57.2123	-2.1309	132.8	245.9	209.0	CMB
Tiree Radar	56.4556	-6.9230	120.7	223.5	125.0	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

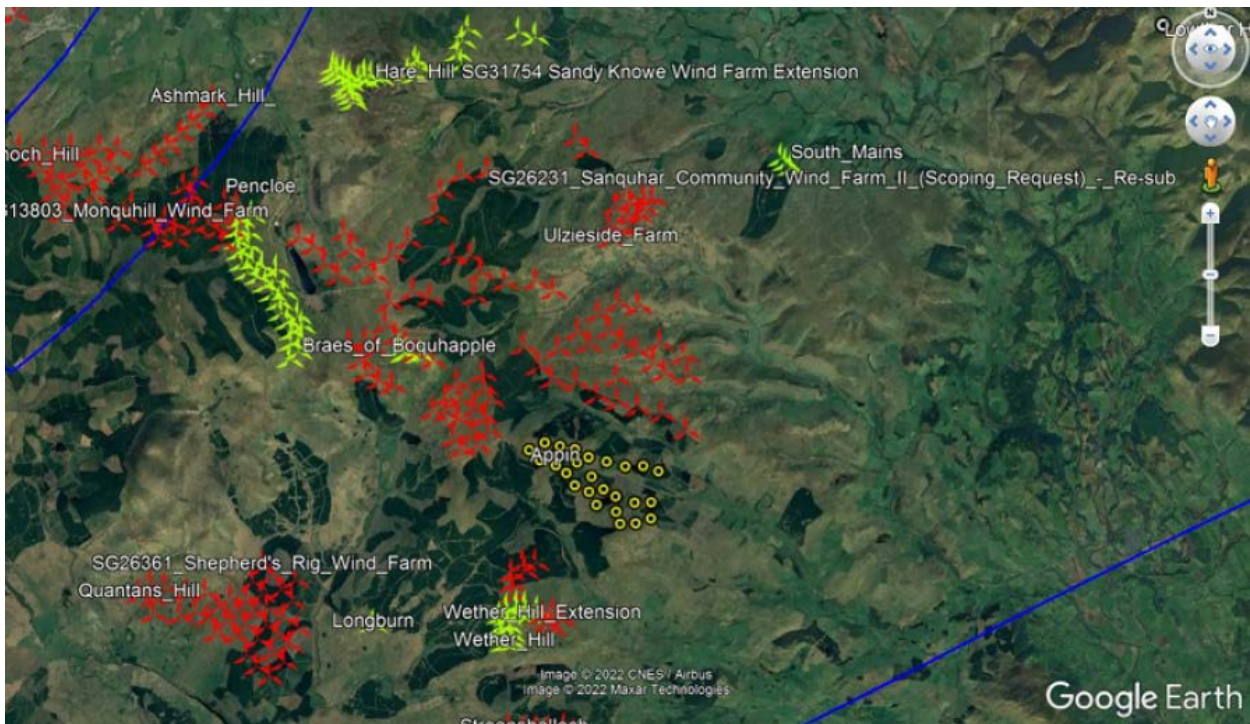
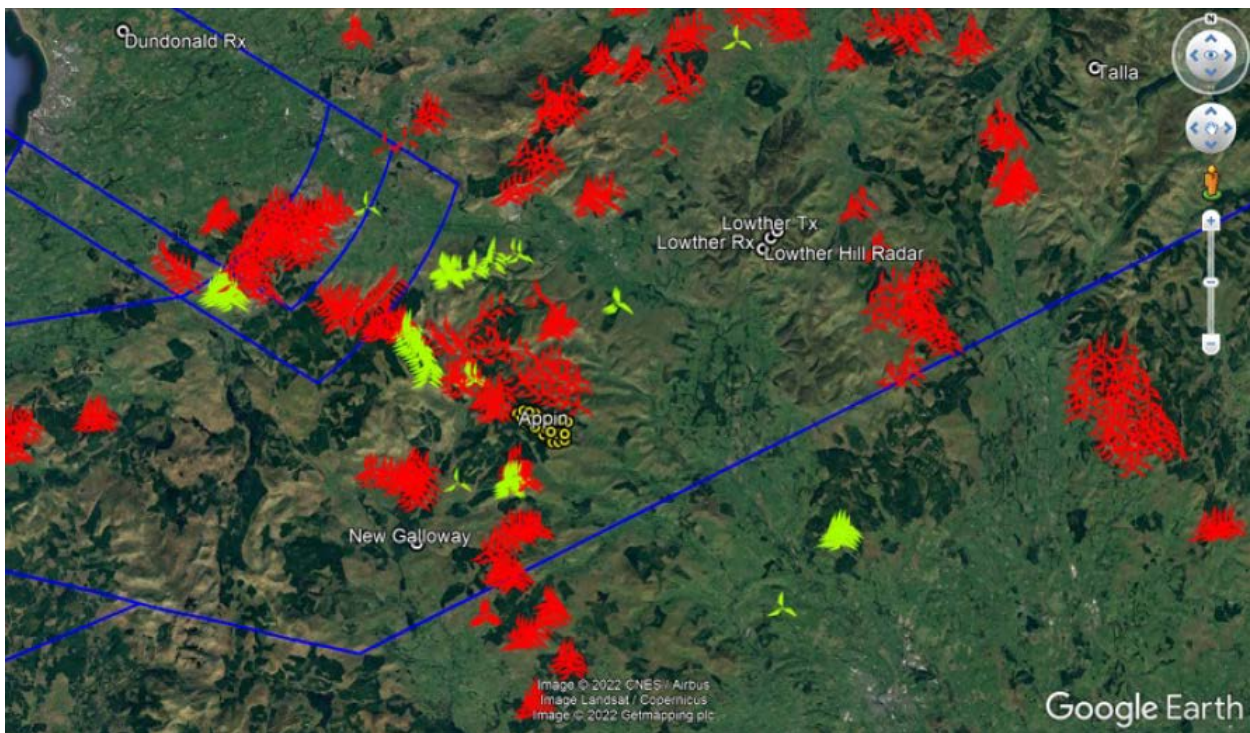
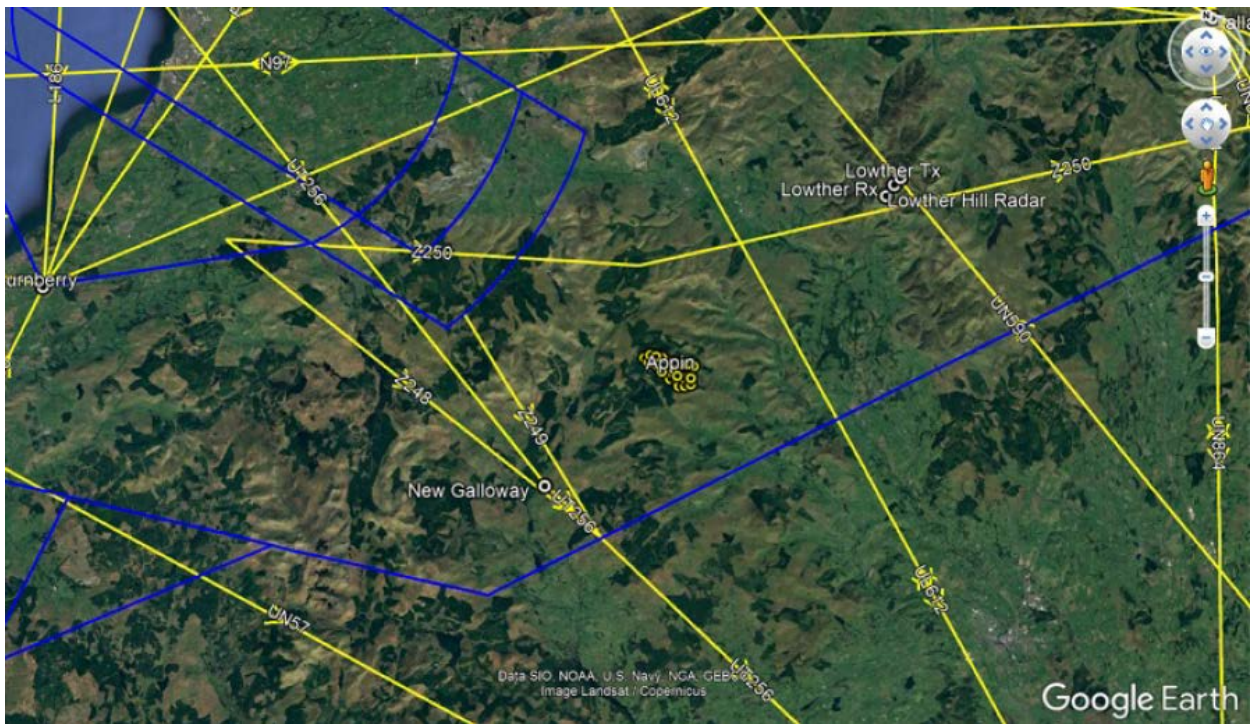


Figure 1: Proposed development location shown on an airways chart





Figures 2 and 3: Proposed development shown alongside other recently assessed applications

- consented/built
- impact -accepted
- impact -objection
- mitigated
- mitigation -proposed
- no impact
- refused/withdrawn

From: [Ed Tooth](#)
To: [Bonner V \(Victoria\)](#)
Subject: RE: Request for Scoping Opinion Appin Wind Farm
Date: 19 April 2022 09:32:39
Attachments: [image004.png](#)

Dear Vicki,

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

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36

APPLICATION FOR: Appin Wind Farm

Many thanks for consulting us on the above-referenced wind farm scoping. I am just writing to confirm that we have no comments to make regarding this proposal.

All the best,

Ed Tooth

Conservation Officer – Scottish Lowlands and Southern Uplands (Dumfries & Galloway, East Ayrshire, Scottish Borders, South Ayrshire and South Lanarkshire)

Please note that I am currently working from home where mobile signal is very poor. Email is the best way to contact me at this time.

Dumfries and Galloway Office – RSPB, The Old Schoolhouse, Crossmichael, Castle Douglas, DG7 3AP
Mobile 07823 553449

rspb.org.uk

Let's give nature a home in Scotland



RSPB Scotland is part of the RSPB, the UK's largest nature conservation charity, inspiring everyone to give nature a home. Together with our partners, we protect threatened birds and wildlife so our towns, coast and countryside will teem with life once again. We play a leading role in BirdLife International, a worldwide partnership of nature conservation organisations.

The Royal Society for the Protection of Birds (RSPB) is a registered charity: England and Wales no. 207076, Scotland no. SC037654

From: [Miller, Craig](#)
To: [Econsents Admin](#)
Cc: [Bonner, V \(Victoria\)](#); [Regadmin](#); [Shearer, Scott](#)
Subject: [OFFICIAL] FW: Request for Scoping Opinion Appin Wind Farm 22/00515/NECON
Date: 28 March 2022 09:05:06
Attachments: [image001.png](#)
[image002.png](#)
[image004.png](#)

Dear Sir/Madam

We thank you for the Scoping consultation on the above wind farm. Having noted that the turbines would be at least 35KM from this Council's administration area and also that there is little visibility from our area, we would have no comments to offer on the submission on this occasion,

Regards

Craig Miller
 Principal Planning Officer
 Planning Housing and Related Services
 Scottish Borders Council
 Tel: 01835 825029
 E-mail : cmiller@scotborders.gov.uk

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How are you playing [#yourpart](#) to help us keep the Borders thriving?



From: Tait, Laura <Laura.Tait@scotborders.gov.uk> **On Behalf Of** Regadmin
Sent: 25 March 2022 09:51
To: Miller, Craig <CMiller@scotborders.gov.uk>
Cc: Shearer, Scott <SShearer@scotborders.gov.uk>
Subject: FW: Request for Scoping Opinion Appin Wind Farm

Another ECU scoping application - can you advise who this should go to

Laura Tait
 Registration/Administration Assistant
 Development Management
 Planning Housing and Related Services
 Scottish Borders Council
 Council Headquarters
 Newtown St Boswells
 Scottish Borders TD6 0SA
 Tel: 01835 825 586 (Direct Dial)
 E-Mail: laura.tait@scotborders.gov.uk



Scottish
Forestry
Coilltearachd
na h-Alba

A76

Greystone Park
55/57 Moffat Road
Dumfries DG1 1NP
forestry.gov.scot

Email: southscotland.cons@forestry.gov.scot
Tel: 0300 067 6500

Conservator: Neil Murray

Ms Vicky Bonner
Energy Consents Unit
Scottish Government

31.03.2022

Dear Ms Bonner,
**THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND)
REGULATIONS 2017**

**REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36
APPLICATION FOR APPIN WINDFARM**

Thank you for consulting Scottish Forestry with regards to the scoping for the Appin Windfarm. I note that this proposal is predominantly within an area of commercial forestry and so the notes below will apply to this scheme.

Scotland's woodlands and forestry are an economic resource, as well as an environmental asset, as stated in the third National Planning Framework (para4.23, page 48, published at [National Planning Framework 3 - gov.scot \(www.gov.scot\)](http://www.gov.scot))

There is a strong presumption in favour of protecting Scotland's woodland resources. For this reason the Scottish Government published a [policy](#) on control of woodland removal in (refer Scottish Planning Policy paragraph 218). The policy aims protect the existing forest resource in Scotland and supports woodland removal only where it would achieve significant and clearly defined additional public benefits. In some cases, including those associated with development, a proposal for compensatory planting may form part of this balance.

The criteria for determining the acceptability of woodland removal and further information on the implementation of the policy is explained in the policy on control of woodland removal. These should be taken into account when preparing the development plans for a wind farm proposal. Beyond this, applicants should refer to guidance documents issued by Scottish Forestry in relation to good forestry practice, sustainable forest management and associated environmental issues.

Woodland Management and tree felling

The first consideration for the developer should be whether the underlying purpose of the proposals can reasonably be met without resorting to woodland removal. Design approaches which reduce the scale of felling required to facilitate the development should be considered and integration of the development with the existing woodland structure is a key part of the consenting process.



Scottish Government
Riaghaltas na h-Alba
gov.scot

Scottish Forestry is the Scottish Government agency responsible for forestry policy, support and regulation

Is e Coilltearachd na h-Alba a' bhuidheann-ghnìomha aig Riaghaltas na h-Alba a tha an urra ri poileasaidh, taic agus riaghladh do chaoilltearachd

BRAVE values and behaviours are the roots that underpin our work.



Where a developer intends to construct a windfarm within a forest, partially within a forest, or that will affect the forest environment, it is important that pre-application discussions takes place with Scottish Forestry (SF), the planning authority and other relevant key agencies, at the earliest possible stage of the project, to ensure all parties have a shared understanding of the nature of the proposed development, information requirements and the likely timescale for determination. This collaborative approach will ensure that all forestry issues are identified and mitigated at the earliest opportunity.

The developer should consider the potential cumulative impact of the proposed development in respect to the local and regional context. This should include consideration of potential cumulative impact of proposed woodland removal, when considering existing development in the surrounding woodland. In particular consideration needs to be given to the implication of felling operations on such things as habitat connectivity, landscape impact, impact on timber transport network and forestry policies included in the local and regional Forestry and Woodland Strategies and local development plans.

The EIA Report should include a stand-alone chapter on 'Woodland management and tree felling' that describes and recognises the social, economic and environmental values of the forest and the woodland habitat and take into account the fact that, once mature, the forest would have been managed into a subsequent rotation, often through a restructuring proposal that would have increased the diversity of tree species and the landscape design of the forest. The chapter should describe the baseline conditions of the forest, including its ownership. This will include information on species composition, age class structure, yield class and other relevant crop information. The baseline should be prepared from existing records, site surveys and aerial photographs. The chapter should clearly indicate proposed areas of woodland for felling to accommodate new turbines, access roads and other infrastructure. Details of the area to be cleared around those structures should also be provided, along with evidence to support the proposed scale and phasing of felling. The chapter should describe the changes to the forest structure, the woodland composition and describe the work programme. The felling plan should clearly identify which areas are to be felled and when.

Trees cleared for turbine bases, access roads and any other wind farm related infrastructure must be replaced by replanted on-site or on an alternative site (compensatory planting). The restocking plan should show which areas are to be replanted and when during the life of the windfarm. The plan should clearly identify and describe the restocking operations including changes to the species composition, age class structure, timber production and traffic movements. Integration of the windfarm into future forest design plans is a key part of the development process. Applicants are therefore advised to prepare a Long Term Forest Plan, alongside their EIA Report, that provides a strategic vision to deliver environmental benefits through sustainable forest management and describes the major forest operations over a 20 years period. Such a plan should be presented to the planning authority, as a technical appendix as part of the EIA Report, for context.

SF is the main forestry consultee and should be consulted throughout the development of the proposal to ensure that proposed changes to the woodland are appropriate and address the requirements of the policy on control of woodland removal.

It should be made clear that both felling operations and compensatory planting (if relevant) must be carried out in accordance to good forestry practice as defined in the UK Forestry Standard (UKFS). The UKFS, supported by a series of guidelines, is the reference standard for sustainable forest management in the UK and provides a basis for regulation and

monitoring. The Scottish Government expects all forestry plans and operations in Scotland to comply with the standards. SF therefore expect for EIA Report developed for wind farms (and other projects that impact on forests) to clearly state that the project will be developed and implemented in accordance with the UKFS and associated guidelines. A key component of this is to ensure that even-age woodlands are progressively restructured in a sustainable manner: felling coupes should be phased to meet adjacency requirements and their size should be of a scale which is appropriate in the context of the surrounding woodland environment. Details of the proposed mitigation should not be left to post-consent Habitat Management Plans (or others) to decide and implement. The specifics of the proposed mitigation should be included in a Compensatory Planting Plan, appropriately described in the EIA Report, as they are vital in understanding the development in full.

Scottish Forestry

SF is the Scottish Government agency responsible for forestry policy, support and regulations so has an interest in major developments that have the potential to impact on local forests and woodlands and/or the forestry sector.

Relevant discussion on forestry matters should take place prior to the submission of an EIA Report and developers and their consultants should allow sufficient time in their project plan to accommodate such advice. Developers should consult the local SF Conservancy office that can be accessed at: [Scottish Forestry - Contact](#)

Yours Sincerely

Neil Murray: Conservator
South Scotland Conservancy.



Econsents_Admin@gov.scot

Vicki Bonner
 Consents Caseworker
 Energy Consents Unit
 The Scottish Government

Our Ref: 05991
 03/05/2022

Dear Ms Bonner,

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

ECU ref: ECU00003447

Thank you for your email of 25th March 2022 seeking comments on the scoping report for the above proposal. We gratefully acknowledge the additional time allowed for our response.

ScotWays records

The National Catalogue of Rights of Way (CROW) does not record any rights of way that cross or are close to the application site as shown on Figure 3.1 *Site Location*.

In searching our records at this scoping stage, we have focussed solely on the immediate area of the proposed application. If required by the applicant to inform their Environmental Impact Assessment (EIA), maps of a wider search area are available from the Society, alongside a more detailed response.

Other Access to Land

You should be aware that other forms of public access to land may affect the proposed application site. More detail about these other types of access is set out in the enclosed Catalogue of Rights of Way Guidance Notes.

In particular we note that the Scoping Report's Chapter 12 *Socio-Economics* refers to the Southern Upland Way, the local core path network (including the directly affected Core Path 51 *Benbuie to Troston Hill*) and Andy Goldsworthy's landscape sculptures *Striding Arches*. We anticipate that impacts on all these valuable recreational resources, including their amenity, will be fully assessed in relation to any planning application.

Wind Farms and public access

It is our understanding that there is very little guidance regarding the siting of turbines in relation to established paths and rights of way, so we draw your attention to the following:

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

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

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

Proximity to Highways and Railways

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

ScotWays considers the above Note sets out a reasonable principle for a recommended minimum separation distance. There could also be site specific factors which would lead us to prefer a larger minimum separation distance; these could include the affected route being one of Scotland's Great Trails or it being known for equestrian use, for example. ScotWays is likely to object to any proposal where the above principle is not followed, including where a micro-siting allowance could lead to turbine encroachment upon a route because it has been insufficiently buffered.

While it is useful to see Figure 3.2 *Proposed Development (Scoping Layout)* which gives indicative turbine locations, as useful would be to see a proposed on-site track layout along with the site's access route – if we have overlooked such a plan, we will be pleased to have it brought to our attention. That said, the afore-mentioned directly affected Core Path 51 clearly falls partly within the site boundary as shown on Figure 3.2, and it will be important to take into account that this core path is approached along a relatively narrow public road, so recreational impacts will need to be considered along that too. It may also be relevant to note here that concerns have previously been raised with ScotWays about the impact of forestry traffic on the condition of this core path, with knock-on effects upon its accessibility for visitors and local residents alike. Reportedly, this is a popular route with the general public, so it would seem that there is a potential opportunity here to address any ongoing issues and prevent future problems as part of the wind farm development proposals.

Recreational amenity

As well as direct impacts of development upon public access, ScotWays has an interest in impacts on recreational amenity, so this includes the impact of wind farm development on the wider landscape. We anticipate that the applicant will take into account both recreational amenity and landscape impacts in developing their proposals for this site. We will consider these issues further should this scoping stage lead to a planning application.

Cumulative Impact

As ScotWays is aware of a number of wind turbine proposals in this general area, we are particularly concerned that the cumulative impact of such development is taken into account.

Comment

Under section 3 of the Land Reform (Scotland) Act 2003, there is a duty upon landowners to use and manage land responsibly in a way which respects public access rights. Under section 14 of the same Act, access authorities have a duty to uphold access rights. We suggest that the applicant may wish to approach Dumfries & Galloway Council's access team for their input when drawing up their Access Management Plan for their proposed development. Accordingly, we welcome the confirmation that ScotWays and the Council's access team are included on the list of stakeholders to be consulted. In answer to Q12.1, we suggest that local Community Councils also be consulted, such as Tynron CC and Glencairn CC, as well as other local representative groups.

I hope the information provided is useful to you. Please do not hesitate to contact us if you have any further queries.

Yours sincerely,

E A Fahy

Eleisha Fahy, Senior Access Officer



Catalogue of Rights of Way Scoping Comment Guidance Notes

These notes explain what is shown on the map(s) provided with scoping comments and provide information about the public right of access to land in Scotland. All maps are provided on a 1:50,000 scale base.

What is the Catalogue of Rights of Way (CROW)?

CROW was created by ScotWays in the early 1990s with the help of Scottish Natural Heritage (now NatureScot) and local authorities and is an amalgamation of rights of way information from a number of different sources. Mapped at 1:50,000 scale, the catalogue does not include all rights of way – many of these are known only to local people and come to ScotWays' notice only when a problem arises.

CROW is continually updated to take account of new information as it comes to ScotWays' attention.

Catalogue of Rights of Way maps

What is a Recorded Right of Way?

Any right of way that we record in the Catalogue of Rights of Way.

Where any Recorded Rights of Way pass through or close to the wind farm application site a map will be provided showing these.

What is an Other Route?

Any path that we record in the Catalogue of Rights of Way that does not appear to meet the criteria to be a right of way.

Where any Other Routes pass through or close to the wind farm application site a map will be provided showing these.

What is a Heritage Path?

These are historic routes that form part of the transport heritage of Scotland. They reflect our cultural and social development and include drove roads, military roads, Roman roads, pilgrim routes and trade routes.

These routes may or may not be rights of way, core paths or carry some other type of designation.

Find out more about the Heritage Paths project at <http://www.heritagepaths.co.uk>

Where any Heritage Paths pass through or close to the wind farm application site a map will be provided showing these.

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

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

What is a Scottish Hill Track route?

First published in 1924, our book *Scottish Hill Tracks* is a record of the network of paths, old roads and rights of way which criss-cross Scotland's hill country, from the Borders to Caithness.

These publicised routes may or may not be rights of way, core paths or carry some other type of designation.

Copies of our book *Scottish Hill Tracks* can be purchased from the ScotWays webshop: <https://www.scotways.com/shop>

Where any *Scottish Hill Tracks* routes pass through or close to the wind farm application site a map will be provided showing these.

Disclaimer

The routes shown on the CROW maps provided have been prepared from information contained in the records of ScotWays, local authorities, judicial and other records. The inclusion of a route in CROW is not in itself declarative of its legal status.

Other Public Access Information

Unrecorded Rights of Way

Our records only show the rights of way that we are aware of. Scots law does not require a right of way to be recorded in a specific document. Any route that meets the following criteria will be a right of way. This could include any paths, tracks or desire lines within your area of interest. A right of way:

1. Connects public places.
2. Has been used for at least 20 years.
3. Follows a more or less defined route.
4. Has been used by the public without judicial interruption or the landowner's permission.

Core Paths

The Land Reform (Scotland) Act 2003 requires all access authorities to create a system of routes within their area. These are known as core paths and are recorded in the authority's core paths plan. It is anticipated that applicants will have consulted the relevant access authority's core paths plan to check whether any core paths cross or are close to the wind farm application site, and will also have consulted the authority's access team.

The General Right of Access

Irrespective of the presence or absence of rights of way and core paths, the land in question may be subject to the access rights created by Section 1 of the Land Reform (Scotland) Act 2003. Unless the land falls into an excluded category in Section 6 of this Act then the public has a right of access to the land, and land owners/managers have a duty under the Act's Section 3 to consider this in any decisions made about the use/management of the land.

Other Promoted Routes

There may be part of a promoted route running through or close to any wind farm application site. These will usually be obviously signed with signposts or waymarking and

may feature in guidebooks, leaflets, on local information boards and on websites. The two main types of nationally promoted routes are:

Scotland's Great Trails: <https://www.scotlandsgreattrails.com>

National Cycle Network: <https://www.sustrans.org.uk/map-ncn>

Public and Private Roads

The Roads (Scotland) Act 1984 created the terms public road and private road. Public Roads are those roads which are on the List of Public Roads and, importantly, the roads authority is required to manage and maintain. Private Roads are those roads which are not on the List of Public Roads and thus there is no duty on the roads authority to manage or maintain them. There is a public right of passage over these roads and the owner(s) of a private road may not restrict or prevent the public's right of passage over the road.

If required, the local roads authority should be contacted by the applicant for more information on public and private roads that may cross or pass close to the application site.

More Information on Outdoor Access Law

If you would like to know more about outdoor access law, why not get a copy of our book *The ScotWays Guide to the Law of Access to Land in Scotland* by Malcolm Combe? Visit our website, <https://www.scotways.com/shop> for more information.

Development and Planning Applications

When proposing to develop a site, it is advisable that the applicant reviews the current amount and type of public access across it and presents this as an access management plan as part of their application. This should include rights of way, core paths, other paths and tracks, and take account of how the statutory right of access currently affects the site.

The plan should then consider the effect that the proposed works, during construction and upon completion, would have on any patterns of public access identified. Any good practice guidance associated with the proposed type of development should be considered, e.g. for windfarms the Welsh Assembly Government's Technical Advice Note on Renewable Energy (TAN 8) Proximity to Highways and Railways paragraph 2.25 and the policies contained within any local statutory plans.

Depending upon the proposals there may be specific legal processes that are required to be followed to divert any paths or tracks either temporarily or permanently. These will be in addition to getting planning consent for the proposal. We recommend that applicants contact the access team at the relevant access authority for advice in this regard.

Published October 2019, updated March 2021

Monday, 11 April 2022



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,

Appin Wind Farm, Sanquhar, DG4 6AD
Planning Ref: ECU00003447
Our Ref: DSCAS-0061487-C9V
Proposal: The construction and operation of a new wind farm (Appin Wind Farm) comprising up to 25 turbines each up to a maximum of 230m to turbine blade a tip and ancillary items

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 the proposed activity falls partly within a drinking water catchment where a Scottish Water abstraction is located. Scottish Water abstractions are designated as Drinking Water Protected Areas (DWPA) under Article 7 of the Water Framework Directive. Carsfad Reservoir supplies Lochinvar Water Treatment Works (WTW) and it is essential that water quality and water quantity in the area are protected. In the event of an incident occurring that could affect Scottish Water we should be notified immediately using the Customer Helpline number **0800 0778 778**.

This activity is likely to give some risk to water quality and therefore it would be useful to get the Grid Reference numbers (NGR's) of each of the 25 turbines to understand which turbines provide the most risk. There may also be asset conflicts we need to consider.

Scottish Water have produced a list of precautions for a range of activities. This details protection measures to be taken within a DWPA, the wider drinking water catchment and if there are assets in the area. Please note that site specific risks and mitigation measures will require to be assessed and implemented. These documents and other supporting information can be found on the activities within our catchments page of our website at www.scottishwater.co.uk/slm.

We welcome receipt of this notification about the proposed activity within a drinking water catchment where a Scottish Water abstraction is located.

The fact that this area is located within a drinking water catchment should be noted in future documentation. Also, anyone working on site should be made aware of this during site inductions.

We would request further involvement at the more detailed design stages, to determine the most appropriate proposals and mitigation within the catchment to protect water quality and quantity.

We would also like to take the opportunity, to request that 3 months in advance of any works commencing on site, Scottish Water is notified at **protectdwsources@scottishwater.co.uk**. This will enable us to be aware of activities in the catchment and to determine if a site meeting would be appropriate and beneficial.

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,

Angela Allison

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."

From: [Browne, Adrian](#)
To: [Planning Submissions](#); [Econsents Admin](#); [Bonner V \(Victoria\)](#); [Planning Development](#)
Cc: [Horwill, Ben](#)
Subject: RE: Request for Scoping Opinion Appin Wind Farm
Date: 13 April 2022 10:06:46
Attachments: [image001.png](#)

Good Morning Victoria,

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

**REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36
APPLICATION FOR** Appin Wind Farm

I refer to the above subjects.

Having examined the documentation – and in particular the location and ZTV documentation relative to any potential impacts on, and within the boundaries of South Ayrshire Council, I do not wish to make any formal observation or comment on the EIA Scoping. I am satisfied that matters in this respect will be addressed appropriately and proportionately.

Thank you for consulting South Ayrshire Council on the above matter.

Kind regards
Adrian.



Community And Enterprise Resources
Executive Director **David Booth**
Planning And Economic Development

Scottish Government
Energy Consents Unit

Our Ref: P/22/0558
Your Ref:
If calling ask for: James Wright
Date: 22 April 2022

Dear Sir/Madam

Town and Country Planning (Environmental Impact Assessment)(Scotland) Regulations 2017
Regulation 17 - Scoping opinion request

Proposal : Scoping opinion request for proposed section 36 application for the erection of up to 25, 230m to tip high turbines (Neighbouring Authority Consultation)
Site address : FOR GAZ USE ONLY - Appin Wind Farm,
Application no : P/22/0558

I refer to your request for a scoping opinion which was received on 30 March 2022 .

A formal response to the request will be provided within five weeks from the date received, or such longer period as may be agreed in writing with yourself.

If we need additional information in order to adopt a screening opinion, we will contact you within 21 days of the date of receipt of your scoping request.

If you wish to keep up to date with the progress of your request, you can call the telephone number at the top of this letter quoting your reference number, or check the Council's Planning Portal at www.southlanarkshire.gov.uk

Yours faithfully

Area Manager

Privacy Notice – Planning applicants

Using Your Personal Information

We will use the information you have given us to process the application you have submitted to us.

We are required to keep a register of planning applications under section 36 of the Town and Country Planning (Scotland) Act 1997. The information that comprises the register is set out in

Montrose House, 154 Montrose Crescent, Hamilton, ML3 6LB
Email james.wright@southlanarkshire.gov.uk Phone: 01698 455903



Schedule 2 of the Town and Country Planning (Development Management Procedure)(Scotland) Regulations 2013. These records are made public and will be published and available to view on the Council's website.

Once a decision has been made on an application, information and documents will be retained and archived. We may also use personal information for historical, research or statistical reasons.

We will only process your personal information when it is lawful to do so.

Your rights

You have the right to ask us to

- confirm that we are using personal information about you, detail what that information is, to whom we have disclosed your information and a copy of the information that we have about you (The right of access)
- correct any incorrect or misleading personal information that we have about you (The right to rectification)
- stop using any or all of your personal information (The right to object)
- delete or destroy your personal information (The right to erasure) and
- stop using your personal information until we can look into correcting your personal information or our justification for using your personal information or to stop us deleting your personal data where you need it in connection with any legal claims (the Right of Restriction) and
- pass your personal information to someone else

For more information on your rights and how to exercise them or for information about how we manage your personal information, you can access the Council's [Privacy Notice](#) on the Council's website or you can ask for a paper copy from the Data Protection Officer (details are below).

If you have any queries or are unhappy about the way that we use your personal information or have responded to you in relation to any of your rights, you can contact



The Council's Data Protection Officer

The Data Protection Officer,
Administrative and Legal Services,
Finance and Corporate Resources,
Floor 11,
Council Offices,
Almada Street,
Hamilton
ML3 0AA

Tel: 0303 123 1015

Or by email to dp@southlanarkshire.gov.uk

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

Your ref:
ECU00003447

Our ref:
GB01T19K05

Date:
14/04/2022

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 APPIN WIND FARM

With reference to your recent correspondence on the above development, we acknowledge receipt of the Scoping Report (SR) prepared by Land Use Consultants Ltd (LUC) in support of the above development.

This information has been passed to SYSTRA Limited (SYSTRA) for review in their capacity as Term Consultants to Transport Scotland – Roads Directorate. Based on the review undertaken, we would provide the following comments.

Proposed Development

The proposed development comprises up to 25 turbines up to 230m in height to blade tip located approximately 12.5km to the west of Thornhill within Dumfries and Galloway. The nearest trunk road is the A76(T) which lies approximately 10km east of the site.

Assessment of Environmental Impacts

Chapter 10 of the SR presents the proposed methodology to assess the predicted transport and access issues that may arise from the construction of the proposed development.

This states that the Transport & Access EIAR Chapter will be supported by a Transport Assessment report and Abnormal Load Route Survey. We note that the thresholds as indicated within the Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Road Traffic are to be used as a screening process for the assessment and Transport Assessment Guidance (Transport Scotland, 2012) will be used to inform the assessment. This is considered appropriate.

We note that a peak construction period assessment will be undertaken into the effects of construction traffic on both the local and trunk road networks. We note that the study area has not been identified within the SR. Transport Scotland would state that the proposed study area will require to include the trunk road approach routes.

The SR indicates that potential environmental impacts such as driver delay, pedestrian amenity, severance, safety etc will be considered and assessed where the IEMA Guideline thresholds for further detailed assessment are breached. These specify that road links should be taken forward for assessment if:

- Traffic flows will increase by more than 30%, or
- The number of HGVs will increase by more than 30%, or
- Traffic flows will increase by 10% or more in sensitive areas.

We note that baseline traffic count data will be obtained from a new Automatic Traffic Count (ATC) survey located on one or more appropriate locations on the local road network, once the proposed access route is defined. The SR states that further traffic data for the local road network will be obtained from UK Government Department for Transport (DfT) traffic count data, the Traffic Scotland database, or from specifically commissioned traffic surveys. We also note that National Road Traffic Forecasts (NRTF) Low Growth will be applied to obtain construction year base traffic. Transport Scotland is satisfied with the application of growth but would ask that all trunk road traffic data be sourced directly from Transport Scotland.

It is noted that any impacts associated with both the operational and decommissioning phases of the development are to be scoped out of the EIA. We would consider this to be acceptable in this instance.

Abnormal Loads Assessment

The SR states that detailed swept path analyses will be undertaken for the main constraint points on the route from the port of entry through to the site access junction to demonstrate that the turbine components can be delivered to site and to identify any temporary road works which may be necessary. This will include an initial Electronic Service Delivery for Abnormal Loads (ESDAL) weight review for structures on the proposed access route from King George V Docks in Glasgow to the site via the strategic trunk road and local road networks.

It should be noted that Transport Scotland will require to be satisfied that the size of turbines proposed can negotiate the selected trunk road route and that transportation will not have any detrimental effect on structures within the trunk road route path.

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

It should also be noted that any proposed changes to the trunk road network must be discussed and approved (via a technical approval process) by the appropriate Area Manager(s) prior to the movement of any abnormal load.

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 or alternatively, Alan DeVenny at SYSTRA's Glasgow Office on 0141 343 9636.

Yours faithfully

Iain Clement

**Transport Scotland
Roads Directorate**

cc Alan DeVenny – SYSTRA Ltd.

3. Project Site Description

Q3.1: Confirmation is requested on the proposed approach to the assessment of decommissioning.

We believe the proposed approach is inadequate.

Whilst we understand the unknown elements of future technologies, national and local policies, and electricity requirements, we would ask that the impacts of decommissioning on our residents, residential amenity, local businesses, cultural heritage, biodiversity, hydrology and our communities is fully considered.

We would also like to add our concerns about access to the site, both in decommissioning AND commissioning. The equipment required will include heavy diggers, cranes, and abnormal loads as well as general construction traffic. Both the A702 and the road up the Shinnel Glen are totally unsuitable for that form of heavy, long, wide transport. We are concerned about the impact of decommissioning and commissioning on our historic built environment – homes, farms, outbuildings, bridges, drystone dykes, and cultural assets, many of which are hundreds of years old – as well as water supply pipes, road surfaces, and drains, which could be affected with vibration, noise and potential impacts from transport vehicles. These issues are highly relevant and important, regardless of the time scales involved.

We therefore believe that insufficient consideration has been given to the assessment of decommissioning.

4 Landscape and Visual Amenity

Q4.1: Are there any comments on the overall methodology proposed to assess effects on landscape and visual receptors, or to assess cumulative effects?

The scoping report does not address the fact that there are no operational wind farms in the area of the size (Very Large Typology) and scope of the proposed Appin wind farm, whose turbines will be a significant step change in height and impact in the area.

Therefore this windfarm proposal should consider the additional impacts it will have over and above the existing wind farms, and its impact on a far larger area than considered by wind farms of smaller typologies.

Q4.2: Are there any comments on the proposed list of assessment viewpoint locations (including night-time assessment viewpoint locations)?

The list included in the scoping report is inadequate.

Additionally, the information in Appendix B, Cultural Heritage Scoping table, contains many inconsistencies. For example, Chanlockfoot farmhouse and steading (LB17293) states ‘The ZTV suggests

that up to 5 turbines could be visible, but these will be screened to some extent by intervening topography and vegetation’ whilst the ‘No. of Turbines Theoretically Visible (Scoping Layout)’ states that **6-10** turbines would be visible.

Many of the comments in this section also state that ‘turbines could be visible, but these will be screened to some extent by intervening topography and vegetation’. Given that the authors of this scoping document have no knowledge of how these homes and their curtilage are used and enjoyed, or how buildings are used, this statement is not applicable, particularly given the fact that much of the stated screening of turbine is from vegetation, or commercial forestry which will be harvested during the lifetime of this proposed wind farm.

We would like to add that the impacts of this development on the Dark Skies Park and our local Dark Skies, which are an important local tourist feature are also considered both as its own impact, and also as a cumulative impact with other wind farms currently in planning/scoping.

The impact of night time assessment should also include potential cumulative effects with other lit turbines of adjacent wind farms should they be consented.

Q4.3: Are there any further wind farm sites to those shown on Figure 4.4, or changes to project development status, which should be considered as part of the cumulative assessment?

Whiteneuk and Cloud Hill windfarms

Q4.5: Has the consultee identified any further landscape or visual receptors to be considered within the assessment (i.e. where it is expected that significant effects may occur)?

Yes we have identified further landscape and visual receptors to be considered in the assessment. We would ask that the following locally important viewpoints are also included:

- Viewpoints for all properties in Shinnel Glen at least down to Mounthoolie and Bennan including night-time assessment
- Viewpoint from the hill above High Appin (a popular walking track used by locals).
- Cairnkinna in Scaur Glen – a local landmark hill within the Thornhill Uplands Regional Scenic Area (TURSA)
- Glenwhargen Crags – popular local walk in Scaur Glen and within TURSA
- Tynron Doon – Iron Age Fort and popular local walk
- Auchengibbert Hill – popular local walk from Tynron village and within TURSA
- Polskeoch house – at the head of Scaur Glen

- Allan's Cairn – Covenanter's memorial; whilst this is currently surrounded by commercial forestry, given the 50 year lifetime of the windfarm it is very likely that there will be considerable impact of Appin wind farm on this locally important monument when the surrounding forestry is felled.
- U404n/u405n Scour Glen road – very popular road for many users including the 'loop' of Shinnel Glen/Scour glen/A702 used by cyclists

Q4.6: Are there any other relevant consultees who should be consulted with respect to the LVIA?

- Anyone living within 20km of the development who will be impacted by visual and lighting impacts.
- Scotways – because of impacts on the Southern Upland Way; Heritage Paths; Core Paths Network

5: Hydrology, Hydrogeology and Peat

Q5.1: Are there any additional sources of baseline information which should be referred to, to inform the appraisal of effects on hydrology, hydrogeology, and peat?

We are aware that much of the information currently available on line regarding private water supplies is incorrect. Therefore every residential property within the area, including farms, should be consulted for accurate information regarding their PWS.

Local homeowners should also be consulted regarding impacts on private micro-hydro schemes, particularly with regard to off-grid properties.

Local community councils will be able to provide recent and historical local flooding information, and flood defences set up in response to these events.

Q5.2: Is the proposed methodology appropriate?

No. We believe the methodology is lacking in the inclusion of extensive local knowledge regarding water supplies, flooding risks, and impacts on local businesses including farms.

Q5.3: Are the proposed list of effects which are scoped in appropriate?

No. The proposed list of effects which are scoped are not appropriate. There appears to be no consideration of evaluating the impact of this development on local private water supplies, ongoing evaluation of purity of private water supplies should Appin wind farm be consented, or mitigation to ensure the continuation of supply that properties currently enjoy. Whilst the village of Tynron is on a

public water supply, many of the properties in the Shinnel Glen are on private water supplies, and some rely on the Appin/Shinnel waters, and the many burns in the proposed wind farm footprint, running through their fields as a source for livestock. Possible water contamination would affect the ecology of the river and also the birds that rely upon it.

Therefore we believe the impacts of Appin wind farm on private water supplies and local hydrology is not adequately covered in this scoping document.

Q5.4: Is the proposed approach to mitigation appropriate?

As we believe there is insufficient consideration of the effects of the proposed windfarm on hydrology and peat we believe that the proposed approach to mitigation is not appropriate.

Given the importance of peat in the sequestration of GHGs, and its vital role in climate change mitigation, the avoidance of peat areas greater than 0.5 metres should be of utmost importance.

6 Ecology

Q6.1: Do consultees agree with the range of desk study sources and ecology surveys considered to inform the design and assessment of the Proposed Development?

Yes, but there is extensive local knowledge and recent surveys have been undertaken which could inform the EIA.

Also the statement (para. 6.54) that

Baseline information gathering has not identified the Site as being sufficiently important to lead to the potential for significant effects on the following protected species (and thus are scoped out of assessment):

Wildcat;

Water vole;

Red squirrel;

Badger;

Invertebrates; or

Amphibians and reptiles.

does not appear to be supported by any evidence, and given the presence of red squirrel, badger, invertebrates and amphibians and reptiles in the area then further explanation of this statement should be provided.

Q6.2: Do consultees agree that the full range of likely effects to be assessed within the EIA Report has been adequately identified and is proportionate to the nature of the Proposed Development?

No. The proposed development is of a larger scale and longevity of any wind farm in the area. Therefore its impacts will be far greater in terms of habitat loss, degradation, fragmentation and destruction, with concomitant impacts on the holistic nature of the delicate ecosystems in this area. Additionally the impacts of lighting on bats and birds does not appear to be considered.

Q6.3: Are there any other relevant consultees who should be contacted with respect to the ecology assessment and scope of baseline information gathering?

Local eco-tourism businesses

Q6.4: Do consultees agree with those features that have been scoped out of assessment in respect to ecology (and the rationale for the decision)?

The Appin windfarm Scoping Document states ‘It is proposed that the potential for indirect effects upon the ecological qualifying interests of any statutorily designated site for nature conservation located greater than 2km from the Site, or for which embedded mitigation and good practice will be sufficient to prevent any impacts, is scoped out of the assessment, by virtue of the static nature of the Sites’. Given the potential for habitat fragmentation, disruption and destruction we do not agree with this statement, as the potential changes in hydrology could have profound impacts on ecology, and designated sites, further than 2km from the site.

Q6.5: Do consultees agree with the proposed scope of the cumulative assessment?

No. Whilst current operational windfarms must be included in any cumulative assessment, greater weight must be given to the proposed Appin Wind Farm proposal because of its height, number of turbines and longevity.

7 Ornithology

Q7.1: Do consultees agree with the range of desk study sources and ornithology surveys considered to inform the design and assessment of the Proposed Development? Including the ‘Target Species’ considered.

Further studies should be considered which draw upon local Citizen Science projects and local observations, particularly the fact that this area is an important migration route for swans and geese in the spring and autumn (Figure 1), and this should be an important consideration in the Appin Wind Farm EIA. (These local observations are in direct contrast to the statement in para 7.21) Migration tracking studies by WWT should be included in the ornithology surveys.



Figure 1: Appin, and Shinnel and Scaur Glens; approximately 250 geese 14th April 2022

Q7.2: Do consultees agree that the full range of likely effects to be assessed within the EIA Report has been adequately identified and is proportionate to the nature of the Proposed Development?

No, the observations recorded in this document appear to be mostly 'snapshots' and do not represent what local residents have seen and recorded. Golden Eagles have been observed in the area on several occasions, and these should be included in any impact assessments given their vulnerability to collision impacts.

Q7.3: Are there any other relevant consultees who should be contacted with respect to the ornithology assessment and scope of baseline information gathering?

Local eco-tourism businesses

Q7.4: Do consultees agree with those features that have been scoped out of assessment in respect to ornithology (and the rationale for the decision)?

No, we agree neither with the statement nor the rationale. The statement that ‘given the lack of records during surveys and lack of onsite desk study records’ (para 7.59) does not reflect the presence of these birds in the area. Absence of evidence is not evidence of absence.

Q7.5: Do consultees agree with the proposed scope of the cumulative assessment?

No. Regardless of the amount of work involved, given the actual, potential, and increasing risk to bird life by wind farms, and the increasing threats to birds from land use change, the undertaking of a cumulative assessment of potential impacts at the NHZ scale should be essential to the EIA.

8 Cultural Heritage

Q8.1: Have the key concerns relating to cultural heritage been identified correctly?

No. The proposed area for Appin Wind Farm lies within the UNESCO Galloway and Southern Ayrshire Biosphere, the proposed Galloway National Park, and is immediately adjacent to the Galloway Dark Skies Park, all of which are important features of the area’s rich cultural heritage. We are concerned about the impact on many important local cultural assets as defined in Q8.2, and the fact that mitigation of the impact of Appin wind farm on these, and other viewpoints, includes local commercial forestry which when felled will open up wide ranging vistas.

Q8.2: Do consultees agree with the designated assets scoped into the assessment or should additional assets also be assessed? (If so, please provide a rationale for why these asset(s) should be assessed).

The designated assets in table 8.1 are a fraction of the rich cultural heritage of the area. Features missing include

- the Striding Arches sculptures – internationally renowned artist Andy Goldsworthy’s sculptures which will be profoundly impacted by Appin Wind Farm
- Allan’s Cairn Covenanters Memorial – locally and nationally important part of Scottish history

- Crawick Multiverse – installation by world famous Charles Jencks
- Local Heritage paths – important to local and national tourism and local users
- Cormilligan – traditional old farmhouse important to national diaspora
- Local built heritage not necessarily listed or designated

Q8.3: Do consultees agree with the proposed approach to baseline gathering and assessment?

Yes, but the importance of local knowledge should be included.

Q8.4: Do consultees agree with the proposed visualisations?

Yes, but other sites should also be included (Q8.2)

9 Noise

Q9.1: Can the consultees confirm that they agree with the proposed assessment methodologies, specifically the use of ETSU-R-97 and the IOA GPG to assess operational noise and BS5228 to assess construction noise?

The value of ETSU-97 has been repeatedly called into question in recent wind farm applications, particularly in the application of increased noise levels as a result of ‘financial involvement’ with the wind farm.

High Appin and other properties down Shinnel Glen are highly likely to be affected by noise, flicker, vibration, etc. Noise assessments based on data calculated from similar height turbines on similar terrain should be made, and where no such data exists then extrapolated with appropriate precautionary upper limits (double that of data used currently). ETSU97 would not be suitable for the proposed turbines.

Q9.2: Can consultees agree that assessment of vibration, low frequency noise, amplitude modulation and decommissioning noise be scoped out of EIA?

No, vibration, low frequency noise, amplitude modulation and decommissioning noise **CANNOT** and **MUST NOT** be scoped out of the EIA. There is increasing evidence that shows the physical and mental damage caused by low frequency noise and AM, both to humans and to livestock. There is no supporting data to suggest this will not be an issue with a wind farm of the size and longevity of Appin wind farm, particularly with the adjacent commercial forestry harvesting providing a constant change in ambient acoustics.

10 Traffic

Please note that Tynron Community Council specifically requests that the Shinnel Glen road is excluded from ALL access proposals for ANY traffic associated with the proposed development.

Q10.1: Is the proposed methodology considered acceptable?

No. Local surveys and knowledge must be included in the collation of information regarding traffic. Local core paths and the Southern Upland Way cross the footprint of the proposed wind farm, and so pedestrian, bike and horse traffic must also be factored in to the traffic assessment.

Q10.2: Are the methods proposed for obtaining traffic flow data acceptable?

Partly, but see 10.1 above

Local timber traffic should be included in any assessments.

Q10.3: Is the use of Low National Road Traffic Forecasts (NRTF) acceptable for the whole of the study?

No, because of the use of the area as a recreational amenity by walkers, runners, holiday makers, cyclists, horse riders and local residential, business and service providers' traffic. As the projected life time of the wind farm is 50 years, this data must be constantly reviewed.

Q10.4: What cumulative traffic flows from committed development should be included in the assessment?

All traffic flows, including projected flows for repairs and servicing.

The on-going timber traffic should be considered

Traffic flows from local businesses

11 Aviation

Q11.1: Does the proposed method for consultation with aviation stakeholders meet the requirements of the ECU?

Not relevant to TCC

12 Socio-Economics

Q12.1: Are there any other relevant consultees who should be consulted with respect to the assessment of effects on socio-economics?

Yes, local businesses including farmers, holiday accommodation providers, work-from-home residents, local tourism operatives.

5 April 2022

Energy Consents Unit
Scottish Government
By email: econsents_admin@gov.scot

Dear Vicki Bonner,

Appin Wind Farm

Thank you for giving VisitScotland the opportunity to comment on the above wind farm development.

Our response focuses on the crucial importance of tourism to Scotland's local and national economy, and of the natural landscape for visitors.

Background Information

VisitScotland, as Scotland's National Tourism Organisation, has a strategic role to develop Scottish tourism in order to get the maximum economic benefit for the country. It exists to support the development of the tourism industry in Scotland and to market Scotland as a quality destination.

While VisitScotland understands and appreciates the importance of renewable energy, tourism is crucial to Scotland's economic and cultural well-being. It sustains a great diversity of businesses throughout the country. According to a recent independent report by Deloitte, tourism generates £11 billion for the economy and employs over 200,000 - 9% of the Scottish workforce. Tourism provides jobs in the private sector and stimulates the regeneration of urban and rural areas.

One of the Scottish Government and VisitScotland's key ambitions is to grow tourism revenues and make Scotland one of the world's foremost tourist destinations. This ambition is now common currency in both public and private sectors in Scotland, and the expectations of businesses on the ground have been raised as to how they might contribute to and benefit from such growth.

Importance of scenery to tourism

Scenery and the natural environment have become the two most important factors for visitors in recent years when choosing a holiday location.

The importance of this element to tourism in Scotland cannot be underestimated. The character and visual amenity value of Scotland's landscapes is a key driver of our tourism product: a large majority of visitors to Scotland come because of the landscape, scenery and the wider environment, which supports important visitor activities such as walking, cycling, wildlife watching and visiting historic sites.

The VisitScotland Visitor Experience Survey (2015/16) confirms the basis of this argument with its ranking of the key factors influencing visitors when choosing Scotland as a holiday location. In this study, over half of visitors rated scenery and the natural environment as the main reason for visiting Scotland. Full details of the Visitor Experience Survey can be found on the organisation's corporate website, here: <https://www.visitscotland.org/binaries/content/assets/dot-org/pdf/research-papers/scotland-visitor-survey-2015-16-full.pdf>

Taking tourism considerations into account

We would suggest that full consideration is also given to the Scottish Government's 2008 research on the impact of wind farms on tourism. In its report, you can find recommendations for planning authorities which could help to minimise any negative effects of wind farms on the tourism industry. The report also highlights a request, as part of the planning process, to provide a tourism impact statement as part of the Environmental Impact Analysis. Planning authorities should also consider the following factors to ensure that any adverse local impacts on tourism are minimised:

- The number of tourists travelling past en route elsewhere
- The views from accommodation in the area
- The relative scale of tourism impact i.e. local and national
- The potential positives associated with the development
- The views of tourist organisations, i.e. local tourist businesses

The full study can be found at www.scotland.gov.uk/Publications/2008/03/07113507/1

Conclusion

Given the aforementioned importance of Scottish tourism to the economy, and of Scotland's landscape in attracting visitors to Scotland, VisitScotland would strongly recommend any potential detrimental impact of the proposed development on tourism - whether visually, environmentally and economically - be identified and considered in full. This includes when taking decisions over turbine height and number.

VisitScotland strongly agrees with the advice of the Scottish Government –the importance of tourism impact statements should not be diminished, and that, for each site considered, an independent tourism impact assessment should be carried out. This assessment should be geographically sensitive and should consider the potential impact on any tourism offerings in the vicinity.

VisitScotland would also urge consideration of the specific concerns raised above relating to the impact any perceived proliferation of developments may have on the local tourism industry, and therefore the local economy.

I hope this response is helpful to you.

Yours sincerely

Gavin Mowat
Government & Parliamentary Affairs Manager
VisitScotland

Marine Scotland Science advice on freshwater and diadromous fish and fisheries in relation to onshore wind farm developments.

July 2020 updated April 2022

Marine Scotland Science (MSS) 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 MSS 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. MSS 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 MSS, 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, MSS 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, MSS 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.

MSS 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.

MSS provision of advice to ECU

- MSS should not be asked for advice on pre application and application consultations (including screening, scoping, gate checks and EIA applications). Instead, the MSS 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, MSS 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, MSS can be asked to provide advice on suitable wording, within a planning condition, to secure proposed monitoring programmes, should the development be granted consent;
- MSS 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, MSS should be contacted.

MSS Standing Advice for each stage of the EIA process

Scoping

MSS 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 MSS generic scoping guidelines then ECU should be informed who will then co-ordinate a response from MSS.

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

MSS 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

MSS 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.

MSS 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

MSS 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 MSS is consulted on these programmes.

Wording suggested by MSS 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 Scotland Science and any such other advisors or organisations.
2. The WQFMP must take account of the Scottish Government's Marine Scotland Science's 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 Marine Scotland Science.
3. Thereafter, the WQFMP shall be implemented within the timescales set out to the satisfaction of the Planning Authority in consultation with Marine Scotland Science 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, MSS 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

Marine Scotland Science advice on freshwater and diadromous fish and fisheries in relation to onshore wind farm developments.

July 2020, updated April 2022

MSS – 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:

MSS 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 MSS advice, please set out reasons.	ECU/MSS use - comments
<p>1. A map outlining the proposed development area and the proposed location of:</p> <ul style="list-style-type: none"> ○ 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; 				

<p>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;</p>				
<p>3. An outline of the potential impacts on fish populations and water quality within and downstream of the proposed development area;</p>				
<p>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;</p>				
<p>5. Any proposed site specific mitigation measures as outlined in MSS generic scoping guidelines and the joint publication “Good Practice during Wind Farm Construction” (https://www.nature.scot/guidance-good-practice-during-wind-farm-construction);</p>				

6. Full details of proposed monitoring programmes using guidelines issued by MSS and accompanied by a map outlining the proposed sampling and control sites in addition to the location of all turbines and associated infrastructure (see wording suggested by MSS for planning conditions).				
7. A decommissioning and restoration plan outlining proposed mitigation/monitoring for water quality and fish populations.				

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 MSS advice, please set out reasons.	ECU/MSS use - comments
8. Any designated area (i.e. SAC), for which fish is a qualifying feature, within and/or downstream of the proposed development area;				
9. The presence of a large density of watercourses;				
10. The presence of large areas of deep peat deposits;				
11. Known acidification problems and/or other existing pressures on fish populations in the area; and				
12. Proposed felling operations.				