23 December 2015

John Low
Policy Officer
Tower House
Station Road
Pitlochry
PH16 5AN
Tel: 01796 470080
john.low@jmt.org

Scottish Government

Roslyn Keenan Admin Officer

Local Energy and Consents

The Scottish Government

Sent by email: EconsentsAdmin@scotland.gsi.gov.uk

Chirmorie Wind Farm

The John Muir Trust wishes to object to the Application by Chirmorie Wind Farm Limited to construct a wind farm at Chirmorie, approximately 5.5 kilometres (km) south west of Barrhill in South Ayrshire. The Section 36 proposal would feature 22 turbines with tip heights of 146.5 metres and an anticipated capacity of approximately 55 to 80 Mega Watts (MW). If approved the wind farm will be sandwiched between Scottish Power Renewables' under-construction 239MW Kilgallioch wind farm (96 turbines 146m high) and their operational 120MW Arecleoch wind farm (60 turbines 120m high).

The John Muir Trust is the leading wild land conservation charity in the United Kingdom. Working with people and communities to conserve, campaign and inspire, the Trust is a membership organisation that seeks to ensure that wild land is protected and enhanced and that wild places are valued by and for everyone.

Scotland's wild land is an asset of national and international significance but it is a finite resource. Wild land plays a vital role for carbon storage in trees and peatland, gives us clean air, water and food and is home to valuable wildlife. Wild land also plays a vital role in supporting tourism and a wide range of other economic and leisure activities.

The Trust is committed to policy principles which support the current targets of the UK Government and devolved governments for greenhouse gas emissions reduction as these are the primary public policy tools directed at climate change mitigation. However, the Trust does not support the construction of industrial-scale wind energy developments on wild land or developments that would impact adversely on wild land.

The Trust has considered the application against its' :

- Wild Land Policy 2010
- Built Development Policy 2013
- Energy and Wild Land Policy 2013 and
- National Planning Framework (3) 2014
- Scottish Planning Policy (2) 2014
- Scottish Natural Heritage Wild Land Areas Map 2014

1. **Cumulative impact.** We are seriously concerned about the additional cumulative impact the proposed development would have if consented. Scottish Natural Heritage's own guidance on cumulative impact (March 2012) states that two wind farms '**need not be intervisible'** to have an impact. The John Muir Trust believes that the Chirmorie Wind Farm would have a significant and detrimental effect in terms of **'Combined Visibility' and 'sequential impact'**. If approved this wind farm would add to an existing mosaic of consented and operational wind farms. As visitors and local people traverse the area they will be exposed to very significant visual intrusion by industrial scale windfarms around the Merrick Wild Land Area (as defined by SNH in their Wild Land Areas Map, June 2014). A drive through this increasingly industrialised landscape will not enhance the area's scenic attraction. Mitigation may reduce the impact of these massive structures however given that they will be, in this case 146.5m high to blade tip, 'mitigation' will in reality only have very limited impact. Careful siting and planting cannot hide or screen structures which are so high. For a scale comparison the Statue of Liberty is 93m high.

2. **Implications of the Carn Gorm Wind Farm PLI:** In the 'Appeal Decision Notice' for Carn Gorm the Reporter stated in section 29. ''I do not accept any suggestion that lack of combined visibility necessarily means there is little or no cumulative effect. A cumulative effect can occur from seeing wind farms in sequence''. This judgement supports the SNH Guidance and must be taken into account when considering the potential contribution of the proposal to cumulative impact.

3. **Combined visibility**: It should be noted that the Arecleoch wind farm is 700m to the west and the Kilgallioch wind farm is 600m to the east of this proposed development. In reality this will result in the three wind farms appearing as one.

4. **Energy related developments and proposed developments around the Merrick WLA includes:**

- Glenvernoch
- Shennanton
- Airies
- Arnsheen
- Kilgallioch
- Chirmorie
- Arecleoch
- Altercannoch
- Corwar
- Mark Hill
- Mark Hill Extension
- Lambdoughty

- Hadyard Hill
- Linfairn
- Dersalloch
- Glenmount
- Knockower
- Benbrack
- Carsphairn
- Windy Standard 1,2 & 3
- Quantans
- Shepherd's Rig
- Loch Hill

This list is not exhaustive and includes proposals at Scoping, Application, Consented and Operational stages. However it is indicative of the pressure this landscape in general and the Merrick WLA in particular is under. The progressive 'ringing effect' of wind farms round the wild land area and their visual intrusion will without a doubt devalue its qualities and the Trust is of the view that this must be a material consideration.

The developer in Ch8 Table 8.5 of their ES identifies 22 Operational, Under Construction and Consented wind farms within 40km of Chirmorie. This totals 387 turbines.
Whether considering the 'ringing effect' around the Wild Land Area or the 40km zone identified by the developer the Trust believes that to add Chirmorie would lead to excessive, cumulative, overload.

5. **Visual Impact:** Evidence from the Scottish Government's natural heritage advisor Scottish Natural Heritage shows the rapidly increasing extent to which the Scottish landscape is affected visually by any form of built development. In 2008 SNH Scientific Advisory Committee Report SAC/2008/10/13 stated that ''*between 2002 and 2008; The extent of Scotland unaffected by any form of visual influence declined from 41% to 31%; during that time, a dominant change was wind farm development (from 18 operational in 2002 to 47 in 2008).*

   In their Natural Heritage Indicator (http://www.snh.gov.uk/docs/A1064015.pdf) published November 2014 SNH highlight that ''*The area of Scotland from which one or more types of built development can be seen increased to 73% in 2013, an 11.6% increase from 2008. Examined individually, most of the different types of development showed no change (Table 1). The largest change in visual influence comes from wind turbines; increasing from 41.7% (2012) to 45.9% in 2013; this is more than double the 2008 baseline of 19.9%. Minor roads showed a further 0.2 percentage point increase, mainly in areas of forestry or associated with wind turbine construction. Overhead lines showed a 0.6 percentage point increase, which appears to be mostly related to more complete mapping of networks on Skye and Shetland.*

   Table 1. The visual influence of the individual indicator features from 2008 to 2013 (excluding 2011) based on the percentage of the area of Scotland they can potentially be seen from.

   Note 1: Building density is split into low and high – the data are from the same dataset.
   Note 2: As a result of overlapping indicator features the individual values do not add up to the total value in each year.

	2008	***2009***	***2010***	***2012***	***2013***
Airfields	*7.1*	*7.1*	*7.1*	*6.9*	*6.9*
Major bridges	*0.7*	*0.9*	*0.9*	*0.9*	*0.9*
Extraction industries	*7.6*	*7.6*	*7.6*	*7.6*	*7.6*
Offshore surface structures	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Wind turbines (operational)	*19.9*	*31.6*	*35.6*	*41.7*	*45.9*

Tall structures without wind turbines	*46.3*	*46.2*	*46.3*	*46.1*	*46.1*
Building density (low)	*34.2*	*34.4*	*34.4*	*34.5*	*34.5*
Building density (high)	*2.7*	*2.7*	*2.8*	*2.8*	*2.8*
Motorways	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*
runk roads	*2.6*	*2.7*	*2.7*	*2.7*	*2.7*
Non trunk A roads	*5.4*	*5.3*	*5.3*	*5.3*	*5.3*
B roads	*4.5*	*4.5*	*4.5*	*4.5*	*4.5*
Minor roads	*12.7*	*12.9*	*13.1*	*13.3*	*13.5*
Railways	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
Overhead lines	*7.1*	*7.1*	*7.1*	*7.1*	*7.7*
Overall visual influence	***65.4***	***68.6***	***70.6***	***71.4***	***73***

Taking into account the 2002 figure in SAC/2008/10/13 of 41% of Scotland unaffected by any form of visual influence or conversely 59% affected, we can give a comparison from 2002 to 2013.

2002 59% visual influence of built development

2013 73% visual influence of built development

This equates to a 14% increase from 2002 to 2013 with the dominant factor being operational wind turbines. The Chirmorie wind farm could further reduce the percentage of Scotland's landscape unaffected visually by any form of built development.

A study by the Wildland Research Institute of Leeds University in November 2015 (using SNH data) on Zones of Theoretical Visibility points out that currently operational and consented wind turbines (over 20m high)will visually impact on 17% of all Wild Land Areas. The Chirmorie proposal should be considered within this context. For the reasons stated above and as an additional contributor to 'cumulative impact' as described in SNH Guidance the John Muir Trust believes that the Chirmorie Wind Farm would be significantly detrimental to the area.

6. **National Planning Framework 3:** The Scottish Governments National Planning Framework 3 June 2014 states : *''We will respect, enhance and make responsible use of our natural and cultural assets.*

   ''4.4 Scotland's landscapes are spectacular, contributing to our quality of life, our national identity and the visitor economy. Landscape quality is found across Scotland and all landscapes support place-making. National Scenic Areas and National Parks attract many visitors and reinforce our international image. We also want to continue our strong protection for our wildest landscapes – wild land is a nationally important asset. Closer to settlements landscapes have an important role to play in sustaining local distinctiveness and cultural identity, and in supporting health and well-being''.

   The Trust believes that the proposed development will be visible from Wild Land Area 1 and will have a negative impact on its unique qualities which allowed SNH to identify it as a Wild Land Area in 2014.

7. **Scottish Planning Policy (2):** SPP2 page 47 section 200 states that :
   ''Wild land character is displayed in some of Scotland's remoter upland, mountain and coastal areas, which are very sensitive to any form of intrusive human activity and have little

or no capacity to accept new development. Plans should identify and safeguard the character of areas of wild land as identified on the 2014 SNH map of wild land areas''.

Whilst this application lies outwith the Merrick Wild Land Area it is within view and will without doubt have a significant and negative visual impact.

8. **Glenmorie:** Wholly relevant to this application is the Scottish Government Minister's refusal of consent for the construction and operation of Glenmorie Wind Farm in August 2014. In section 7.134 of his decision letter he states *''Having taken all of the above into consideration, I conclude that the benefits of the proposed development in making a significant contribution to national renewable energy targets, a modest contribution to the local economy during operation with a more substantial contribution during construction and possible improvements to recreational access, would not outweigh the significantly detrimental landscape and visual impacts on the local environment and community. The overall scale of the proposed wind farm and its associated infrastructure would accentuate the adverse impacts on the environment and community to a degree which would be unacceptable. Although the applicant has fulfilled the duties required by Schedule 9 of the Electricity Act by having due regard to those relevant matters and mitigation in the Environmental Statement, Addendum and Supplementary Environmental Information, the environmental impacts of the proposed development would not be acceptable. In a balance of benefits against disbenefits, the proposed development would be contrary to both national planning policy and the local development plan''.*
   The Minister's views as stated above must be recognised and taken into account when considering this application. The fact that a number of consented and operational wind farms are within sight of this land is not a reason for approval but rather is a reason to refuse permission based on cumulative impact.

9. **Peat Management Plan:** The developer's PMP is wholly inadequate and does not give any details of methods of excavation, storage, monitoring or maintenance of the Acrotelm or Catotelm. Indeed it does not mention either horizon of the peat nor does it give any detail as to how the peat would be excavated and transported so as to maintain its form and structure or for how long it would be stored. For absence of doubt peat cannot be excavated, transported and stored and still be expected to operate as a carbon store once it is returned. It cannot be reinstated or restored to its original structure and state. In the same way that if you demolish a house and transport and store all the demolition materials you cannot subsequently take all the bits back and then reinstate/restore the building to its original complete state. .
   It is stated in the applicants PMP 5.3.22 that *'It is estimated that temporary storage of approximately 30,000m3 of peat may be required until a late stage of the project. Good practice (see Section 6.0) dictates that temporary stockpiles of peat should have a maximum height of 2m, therefore an area (or multiple smaller areas equal to) approximately 120m x 125m would be required to temporarily store peat''*. This statement needs much clarification. The area estimated for storage alone is fanciful as it equates to the exact volume estimated to be excavated and needing to be stored. However the volume excavated will take up a much larger area unless it is compacted to the same form as pre excavation. This would cause significant damage to the peat's structure. There appears to be no plan to store the Acrotelm separately from the Catotelm. Peat is a huge carbon store and should not be disturbed but if it is to be excavated then it needs a clearer and more coherent plan than this. Absolute clarity is needed at the outset so decision makers can have confidence that any potential damage will be minimised.

10. **Damage to peat:** The International Union for Conservation of Nature (IUCN) Peatland Programme Briefing Note states *'' In a damaged bog the acrotelm has often been lost because of drainage, burning, trampling, grazing, atmospheric pollution, afforestation or even agricultural inputs such as fertilizer and seeding.* ***This exposes the unprotected catotelm peat to the effects of oxygen, sun, wind, frost and rain and so it begins to degrade, losing carbon back into the atmosphere and into watercourses as it does so****, much as a defoliated tree may stand for a century or more, but with its trunk and bare branches slowly rotting away. A peat bog in this state is termed a haplotelmic bog (i.e. a single layered bog). It may still have a vegetation cover, often of a heathland character, but this vegetation is not adding fresh peat because it is not a wetland vegetation and is more likely to be causing further degradation of the peat through the aerating and drying action of its root systems. Neither is this vegetation capable of altering the natural pattern of microtopography and thus provide ecosystem resilience. Indeed any such pattern is likely to have been lost, degraded into a tussock - dominated micro - erosion complex, or developed into a full -blown erosion complex dominated by haggs and gullies''.*

    This assessment supports our view that anything which potentially exposes and damages peat in any significant quantity, in this case 52700m3, should not be considered or permitted. The PMP does not give any confidence that damage would be minimised and does not show any understanding of the complexity of the structure of peat.

    The authors of the Scottish Government commissioned Carbon Calculator have stated, *"We contend that wind farms on peatlands will probably not reduce emissions, unlike those on mineral soils….. Unless the volume of peat excavated can be significantly reduced relative to energy output, we suggest that construction of wind farms on non-degraded peats should always be avoided." Letter in NATURE magazine, 'Avoid constructing wind farms on peat' 6th September 2012 - Jo Smith, Dali Rani Nayak, Pete Smith University of Aberdeen, UK.*

11. **Socio-economic Impact:** If approved this industrial development would contribute to the further degradation of this landscape resulting in a negative socio-economic impact. There is increasing evidence that as the number of wind farms and turbines increases so does the negative view of these developments by resident and visitor alike. We would cite a **YouGov** poll, commissioned by the John Muir Trust in September 2012, of 2269 people throughout the UK found that 43% of the respondents would be less likely to visit a scenic area which has a large concentration of wind turbines whilst only 2% would be more likely to visit such an area.

12. **A YouGov** poll of 1119 scots adults for the John Muir Trust in June 2013 found that 51 per cent of people in Scotland would be 'less likely to visit a scenic area which contains large-scale developments (e.g. commercial wind farms, quarries, pylons)'.

For the reasons given above the John Muir Trust believes that this application should be refused.

Yours sincerely

John Low

Policy Officer

John Muir Trust