Magnus Hughson
Energy Consents and Deployment Unit
Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

12 December 2011

Dear Mr Hughson,

Re: Electricity Act 1989
Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 S36.
Application by Scottish and Southern Energy to construct and operate The Clyde Extension Wind Farm, located within the Upper Clyde Valley between Biggar, Abington and Moffat.

I am writing on behalf of the Scottish Wildlife Trust[1] to request that you note our **objection** to the above proposed wind farm located within the Upper Clyde Valley.

We believe that the wind farm layout has not avoided known sensitive areas of blanket bog. Blanket bog habitat is afforded the highest level of protection - it is listed in Annex 1 of the EC Habitats Directive. Only c. 12% (i.e. 7/57) of the turbines are located in what is classed in the report as 'low conservation value' habitat. All other turbines and access tracks are sited in either amber zoned (moderate conservation value) or red zoned (high conservation value) areas, the majority of which is M19 blanket bog (National Vegetation Classification). The Environmental Statement (ES) even admits that there will be a significant residual effect on blanket bog. There is insufficient detail in the Habitat Management Plan (HMP) relating to which areas of blanket bog habitat will be restored and indeed *how* it will be restored to give us confidence that the significant effects to blanket bog will be compensated for by implementation of the plan.

We also have serious concerns regarding impacts to ornithological receptors. The estimated collision risk to pink-footed goose is the highest predicted for any wind farm in the UK. Furthermore, the negative impacts during construction and operation of the wind farm to the local resident merlin population requires further scrutiny and in our opinion some of the turbines need to be removed or relocated away from merlin nesting sites.

Specific points regarding the impacts on ecological receptors follow on from the next section.

Extracts of Scottish Wildlife Trust's policy on wind farms which are relevant to this planning application:

SWT recognises that onshore wind farms are amongst the most established of renewable technologies and supports their development as part of Scotland's energy portfolio. But they must avoid sites where there would be unacceptable modification, loss or fragmentation of important species, habitats or ecosystems.

Windfarms located on deep peat blanket bogs for example are unacceptable in terms of their impacts on both biodiversity and carbon loss (from erosion and oxidation of peat). Shallower peats on 'wet heath' habitats can also be important but need to be assessed on a case by case basis as habitat quality varies considerably and in

[1] The Scottish Wildlife Trust's central aim is to advance the conservation of Scotland's biodiversity for the benefit of present and future generations. With over 35,000 members, several hundred of whom are actively involved in conservation activities locally, we are proud to say we are now the largest voluntary body working for all the wildlife of Scotland. The Trust owns or manages over 120 wildlife reserves and campaigns at local and national levels to ensure wildlife is protected and enhanced for future generations to enjoy.

some cases mitigation measures could enhance species populations and habitat quality.

SWT believes that although certain parts of the country may be more strategically suited to wind farm development, each individual application should be carefully assessed for its potential environmental impact before consent is granted. To minimise the need for additional transmission infrastructure, we also recommend that where possible wind farms should be located relatively close to large centres of population.

SWT suggests that habitat enhancement measures should be a requirement of all planning consents either through conditions or legal agreements. In addition, all wind farm operators should be strongly encouraged to enhance the surrounding landscape for wildlife, for example through the creation of functional habitat networks, peatland restoration and sensitive restoration of planted ancient woodland sites (PAWS).

Specific points

Blanket bog

Blanket bog is a priority habitat under Annex I of the EU Habitats Directive. Blanket bog also has priority status in the UK Biodiversity Action Plan.

We note as part of the project design a 'traffic light' system was devised based on sensitivity of habitat types. The intention was to steer development away from red (high conservation value habitat) and amber areas (moderate conservation value). However we are seriously concerned that the identified sensitive areas have not been avoided. According to figure 9.5 (Habitats distribution) we note that six turbines are located in red areas T15E, T18E, T31E, T32E, T3E, T52E, seven appear to be on the borders between red/amber sites, and only seven turbines are located in what is classified as low conservation value habitat. We can only conclude that valuable mire habitat has not been avoided as only 12% of the turbines are located in the least sensitive areas. Of course this estimate does not account for parts of the access track that are located in red and amber areas. We strongly recommend that at least six of the proposed wind turbines should either be removed from the development site plan or relocated to avoid the red zone areas (preferably relocated in green zones). Furthermore, the seven bordering red / amber zones need to be examined again and their location reassessed.

We also believe the calculation of blanket bog lost to development has been underestimated as the indirect effects on the remaining bog caused by drying out of peat has been calculated incorrectly. It is not clear why the indirect effects have been estimated as being the same as direct effects. What scientific evidence is this based on?

Notwithstanding the above the residual effects are deemed to be significant - and a habitat management plan is proposed to compensate for the damage done.

Habitat Management Plan (HMP)

It is difficult to assess the positive effects of the HMP against the damage done to blanket bog as there is only an outline of the plan given in the ES. There is mention of:

changes to the management of parts of these areas in relation to burning and grazing would be the management actions that would be likely to lead to a vegetational shift towards less modified forms such as M19.

The HMP identifies area of search, but this does not mean that all of these areas will be restored. There is an opportunity to restore all of the 'amber' area, using a combination of techniques such as drain blocking, reduced grazing pressure and a moratorium of muirburn on blanket bog. Reduced grazing pressure (which is identified as the main tool) on its own will not be enough. Monitoring over the life time of the wind farm including after decommissioning will be essential. Active intervention may be needed if current techniques are not working. Indicators of success should be defined and reported on at regular and agreed intervals to a steering group.

We have taken guidance from the local raptor study group who suggest that some native riparian woodland planting may not suit resident breeding raptors. More discussion is needed here to ascertain the balance

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between what would increase the biodiversity value of the site and that which would deter notable raptors from flourishing. We note that there has been no habitat mitigation suggested to encourage merlin away from the turbines - indeed, any habitat restoration work must account for the effects on all notable bird species present within the restoration zone.

Assessment of impact on ornithological receptors

Pink-footed goose

We are exceedingly concerned that the collision risk to pink-footed goose is estimated to be 214 mortalities per year. We believe this is the highest estimated collision risk for any windfarm in Scotland or indeed the UK. Although it is stated that unusual weather conditions caused higher than usual goose flight activity this is not to say that these conditions will not occur again. One way to determine if the collision risk estimate was higher than would normally be expected would be to conduct further vantage point surveys.

At the very least we would expect that if the windfarm is consented, detailed and prolonged post construction monitoring would be necessary to determine how many bird collisions are occurring. Weekly carcass searches would be necessary (including an estimate of scavenger rate). If mortality is found to be high, the applicant should consider switching the turbines off during vulnerable periods. This mitigation measure should be agreed before the planning application is consented.

Merlin

We believe the importance of the site for merlin has been underestimated. Merlin is afforded the highest level of protection - it is listed in Annex I of the EC Birds Directive and Schedule1 of the Wildlife and Countryside Act 1981. Merlin is also a Local Biodiversity Action Plan species and is Amber listed in Birds of Conservation Concern. We note that there has been no attempt to estimate the importance of merlin in the wider context e.g. at a regional or national level. However we do note that it is included as a Valuable Ornithological Receptor.

As the breeding population has been estimated at c. four pairs in the ES and six pairs have been confirmed as breeding (with four fledging) in the Camps study[2] this represents c. 8 – 11% of the Natural Heritage Zone (NHZ) population. Therefore the merlin population is at least of *Regional* importance.

We are concerned that the potential impact on the resident merlin population has been underestimated both in terms of displacement during construction and operation of the turbines and from collision risk during the lifespan of the development.

Due to their small size, merlin is notoriously difficult to pick up in flight at distance, and it may be the case that the number of flight lines has been underestimated during vantage point watches. It really is not helpful to discount collision risk as a factor because of the presumption of merlin being more manoeuvrable and thus able to avoid collision. RSPB Scotland has cited the Braes of Doune windfarm in Stirlingshire as an example where the estimated number of collisions was low in the ES but was found to be higher than expected during post construction monitoring; in the first four years of operation at least three juvenile merlin appeared to have died as a result of collisions with turbines.

We also note that the ES has used the conservative estimate of 300 m for estimating disturbance distance over which merlin would be sensitive, when in fact the citation mentioned estimates a range of disturbance of between 300 - 500 m. Adopting the precautionary principle, an estimate of 500 m should have been used in the EA which would imply that at least three merlin nest sites would be vulnerable.

Considering all of the points above, we would like to see the impacts on merlin reassessed in the ES. At the very least we believe some of the turbines should be relocated away from merlin nest sites.

[2] Raptor Survey, Camps Estate 2011, Kenny Sludden

To conclude - we believe that there are significant impacts to blanket bog - a European protected habitat which have not been adequately compensated for in the outline habitat management plan. The impacts to pink-footed goose and merlin require further investigation.

For these reasons we object to the proposed wind farm.

We may be minded to withdraw the objection if:

- c. 14 turbines are relocated outwith sensitive blanket bog habitat (i.e. outwith red and red/amber border zones)
- a detailed HMP shows how the significant impacts to blanket bog will be compensated through habitat restoration - area of proposed blanket bog restoration need to be mapped and an explanation of exactly how the work will be undertaken and monitored should be included
- post construction monitoring of collision risk to pink-footed goose - including carcass searches are conducted. The applicant should agree to switch the turbines off if it is found that significant numbers of birds are being killed
- the collision risk to merlin is reassessed - the developer should explore the possibility of focal surveys to determine the movement of breeding merlin within the wind farm area
- turbines close to merlin nest sites are relocated to avoid disturbance to merlin

The Scottish Wildlife Trust would like to be kept informed of the planning application.

Yours sincerely,

Dr. Maggie Keegan

National Planning Co-ordinator
Scottish Wildlife Trust