Appendix 5.8 Operational Bhlaraidh Deer Management Plan

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Bhlaraidh Wind Farm
Deer Management Plan

Date written: July 2015 ***Date revised:***

1. Introduction

1.1. This Deer Management Plan is provided as part of the planning condition requirements for the Bhlaraidh Wind Farm

Planning Permission
In terms of section 57(2) of the Town and Country Planning (Scotland) Act 1997 Scottish Ministers may on granting consent under section 36 of the Electricity Act direct that planning permission be deemed to be granted in respect of that generating station and any ancillary development (as described in Annex 1). This letter contains the Scottish Ministers decision on such a direction.

Annex 3 (part)

"SNH also wished a competent Deer Management Plan be agreed in writing with SNH prior to construction."

It is intended to be used in the planning and management for deer during the construction and operation of the wind farm. It should not be used as a standalone Deer Management Plan but be considered as an annex to the Glenmoriston Deer Management Group Deer Management Plan (under review).
As with any management plan this must be regarded as a flexible document and it is recommended that this is reviewed and updated post construction looking at the operational phase of the wind farm when any construction disturbance has subsided.

A suggested review date for the wind farm deer management plan is therefore October 2016.

Accordingly this deer management plan is drawn up taking guidance from SNH publications

- *Planning for development: What to consider and include in deer assessments and management at development sites*

and

- *Scotland's Wild Deer A National Approach Including 2015 – 2020 Priorities*

Glenmoriston estate is working with the SNH *best practice guidance on deer management*.

This plan for the wind farm development draws upon the Bhlaraidh Wind Farm Environmental Statement and draws upon information from the earlier 2011 Glenmoriston Deer Management Group Deer Management Plan drawn up by Alan Boulton of Huntaway Consulting, who in turn refers to earlier works by Professor Rory Putman.

Also of relevance to this Deer Management Plan is the *Bhlaraidh Habitat Management Plan brief.*

2. Windfarm factors

The Environmental Statement concludes that without exception no significant effects are predicted on the important ecological receptors from the proposed Bhlaraidh Wind Farm assuming planned and designed mitigation is fully implemented.

The ES describes deer management in Scotland with reference to *Scotland's Wild Deer: a National Approach* which does not indicate deer and wind farms interactions as a significant deer management issue.

Deer have some basic requirements, which can be summarised simply as food and shelter. So long as these are provided then deer are predictable in terms of their needs.

The development will not prevent deer gaining access to their favoured sources of food and shelter. Consequently there is no evidence to suggest that deer behaviour will change in the long term as a result of the wind farm.

Practical experience from other SSE developments (Glendoe, Gordonbush, and Strathy North) suggest that some localised, temporary displacement can sometimes occur around construction whilst work commences, dependent on how habituated or fearful of humans the deer are.

Experience at Gordonbush is that localised displacement of red deer during construction, but not more that 1km from the construction works area. When construction works are completed the deer quickly return. Temporary localised displacement took place is likely to be associated with the wind farm construction but that it disappears as soon as construction is completed in that area.
The situation at Strathy North is somewhat different in that this scenario involves conifer plantation removal, however the red deer population has quickly adjusted and is regularly seen feeding close to both wind farm construction and timber harvesting operations.

There is no evidence that operational wind farms affect deer movements and behaviour in the long term.

Therefore there is no evidence to suggest that the Bhlaraidh Wind Farm any substantial or significant changes in deer movement or behaviour on Glenmoriston Estate or surrounding areas.

It should be noted that there is access to a variety of hydro electric schemes over the estate since the 1960s.

Key dates;

Construction to commence	August 2015
Operational wind farm	October 2016

3. Background Information

3.1. Ownerships and contacts

Tenant:	SSE Generation Ltd.
Contact:	[redacted]
Deer stalker(s):	[redacted]
Deer Mgt Group:	Glenmoriston Deer Management Group
Plan written by:	Neil McKay MICFor

3.2. Location

Nearest town, village, or feature	Invermoriston, Highland
Grid reference	NH 242816
Total area of woodland	1025.79 ha
Total area of open range	2999.19 ha
Total area of land holding	4024.98 ha

3.3. Description of land (woodlands and open range)

This plan refers to the area affected by the Bhlaraidh Wind Farm

Elevation from 60m in Glen Moriston while the upper woodland edge is approximately 180m above sea level. The wind farm development occupies the high ground from Bealach a'Chail at approximately 450m and Loch a' Chra'thaic hydro electric dam at 500m to the highest points of Carn a' Bothain at 578m and Carn Tarsuinn at 616m.

The habitats present within the study area of the Environmental Statement comprise 39% wet heath, 29% unmodified bog and the remainder being a mosaic of other habitats including dry heath, marshy grassland, semi-natural broadleaved woodland, conifer plantation, semi improved acid grassland, semi improved neutral grassland and bracken.

Commercial conifer plantation is at the 'restructuring' stage with felling and restocking taking place. In some areas conifer is being replaced by native woodlands.
New woodland creation is taking place to enhance blackcock habitat.
Leveshie Woods SSSI
Hydro electric dams including Loch a'Chra'thaic
Bhlaraidh Wind Farm development.

3.4. History of Land Management

The Estate was managed for hill sheep until the 1980's resulting in an overgrazed landscape.
From 1990 to the present day the land was managed for sport. The present owners have been in place since 2008 and have actively been engaged in habitat improvement and woodland creation.

The principal sporting activity is Red deer hinds while there is also an interest in walked up grouse shooting and a lowland pheasant shoot.

The Estate currently employs a full time Head keeper and one Under keeper.

3.5. Designations

Designated Areas	Within development site	Adjacent to development site	Not Present	Map
Site of Special Scientific Interest (SSSI)		X		
Special Protection Area		X		
Conservation Area				
National Park				
National Scenic Area				
National Nature Reserve				
Special Area of Conservation				
Environmentally Sensitive Area				
Area of Outstanding Natural Beauty				
Details See ES				

Rare or threatened species	Within development site	Adjacent to development site	Not Present	Map
Red Data Book or BAP species		X		
Rare or threatened species		X		
Details see ES				

Habitats	Within development site	Adjacent to development site	Not Present	Map
Ancient semi-natural woodland (ASNW)		X		
Other semi-natural woodland		X		
Plantations on ancient woodland sites (PAWS)		X		
Comments See also Bhlaraidh Wind farm Environmental Statement				

4. *Wild Deer - The Current Situation*

4.1. ***What is the history of deer in the area?*** (E.g. native red herd, long standing fallow population)

Red deer are the predominant species with some Sika and a few roe deer.

Red deer ranges and movements;
Stags do not tend to be resident within the area of the wind farm but use Glenmoriston Estate as passage from Kintail and Affric during the rut.
Otherwise the resident population within Glenmoriston are red deer hinds which are 'hefted' to the estate.

Deer population on Glenmoriston Estate
Two years of planned helicopter counts have failed but ground survey carried out by estate staff estimate 300 hinds and calves. Within Glenmoriston Estate this equates to a deer density of 8 deer per km^2

Winter feeding
To maintain hinds in good condition and hold them within the estate, deer are offered supplementary feed over winter.

4.2. Annual cull data for recent years

	2011-2012	*2012 -2013*	*2013-2014*	*2014-2015*
Red stags	*45*	*37*	*29*	*30*
Red hinds and calves	*62*	*23*	*3*	*37*
Sika stags	*6*	*1*	*31*	*0*
Sika hinds and calves	*3*	*1*	*0*	*3*

4.3. What are the current impacts?

Impact	Minimal	Moderate	Severe
Browsing	X		
Fraying	X		
Bark stripping	X		
Ground flora degradation		X	
Loss of woodland structure	X		
Deer Road Traffic collisions	X		
Crop damage	X		

5. Future Management

5.1. ***Long Term Vision or Policy*** (e.g. "maintain deer populations in balance with woodland and sporting interests")

To maintain a healthy red deer population as part of the overall estate management and providing sporting opportunities for both the owners and paying guests while maintaining open moorland and bog in favourable condition.

Increase the areas of native woodland for black grouse habitat and provide future shelter for deer.

5.2. Other management objectives that may influence deer management

Bhlaraidh Wind Farm renewable energy development.
Commercial woodland managed through an approved Long Term Forest Plan.

5.3. What are perceived obstacles to achieving objectives?

Initial wind farm construction disturbance may cause a short term behavioural change within deer using the high ground.

Neighbouring estates woodland management objectives requiring higher cull levels which may reduce the available deer within Glenmoriston estate.

5.4. Identify actions for removing obstacles

Monitoring of deer movement and maintaining winter feeding

Engagement with neighbours through the Glenmoriston Deer Management Group.

5.5. Identify potential collaboration with neighbours

Glenmoriston Estate is presently a member of the Glenmoriston Deer Management Group and is supporting the Deer Management Plan revision currently underway.

Neighbouring estates;
Dundreggan,Estate to the west offers an area of deer range of 3376 ha, with a deer density from the 2009 count 6/km^2, Trees for Life, mainly fenced for woodland establishment.
Balnacarn Estate is a deer range area of some 727 ha, with a deer density (2009) 7/km^2, is a sporting estate with separate herds to Glenmoriston
Coirielair, some 3394 ha, deer density (2009) 20/km^2, includes its own wind farm development within a sporting estate.
Forest Enterprise Scotland manage ground to the south on behalf of the National Forest Estate

5.6. Identify carcass handling routes to marketing

Carcasses are handled through the Estates own deer larder.

5.7. Identify need for training or development

The head keeper holds DMQ 1 and 2 and holds the SNH “fit and competent” status

The under keeper holds DMQ 1

Training needs are dealt with as required.

During wind farm construction under Construction, Design and Management Regulations it is expected that estate staff will be included in the relevant induction programme.

Similarly during the operational lifetime of the wind farm staff will be required to be inducted into the operational health and safety requirements.

6. *Cull plan*

6.1. *Identify cull requirement by species* Indicate whether cull intended to achieve **Reduction, Maintenance or Increase**

Species	Red							Sika							Roe							other						
Season	Target			Actual			RMI	Target			Actual			RMI	Target			Actual			RMI	Target			Actual			RMI
	F	M	J	F	M	J		F	M	J	F	M	J		F	M	J	F	M	J		F	M	J	F	M	J	
2015	25	30	15																									
2016	25	30	15																									
2017	25	30	15																									
2018	25	30	15																									
2019	25	30	15																									

Comments

The cull regime is intended to maintain the current population.

However the estate recognises that there may be a need to react to population changes and increase or decrease culls accordingly.

6.2. *What other actions are necessary to support/replace culling?*

Action	
Establishment of deer glades in the lower ground.	Deer fencing around all new woodland creation and restock plantations
Erection of high seats, renewed each season, within SSSI	Chemical protection for bracken control

Comments

7. Monitoring

7.1. How will achievement of the objectives be measured?

Objective or issue	Method of assessment	Monitoring period and frequency	Who is responsible	Use of information
Deer numbers/ Density	Helicopter count as part of DMG	5 years	Glenmoriston Estate	Managing cull levels
Impacts	Appropriate vegetation monitoring as part of DMG	5 years	Glenmoriston Estate	Determining balance of objectives
Cull figures	Game book	Annual	Glenmoriston Estate	Ensuring cull figures are met
Other cull data				

8. Health & Safety issues

- Road Traffic Collisions on the A887. New fencing at the Bhlaraidh Wind Farm entrance will prevent deer movement onto this road.
- Wind Farm Construction and Operation. Induction, liaison and controls from specific risk assessment.

9. Appendices

Map of Bhlaraidh Wind Farm

NMcK 2015

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CREAG NAN EUN FOREST

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Produced by J McDougall
SSE Renewables Developments (UK) Ltd
Dated: 28 Jul 15
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