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**Hollandmey Renewable Energy Development**  
on behalf of ScottishPower Renewables  
Technical Appendix 8.5: Deer Assessment



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# 1 INTRODUCTION

## 1.1 Background

- 1.1.1 This Technical Appendix has been prepared in conjunction with RDS Forestry and Land Consultancy (the relevant Land Manager) and the appointed Deer Controller for the Site, to accompany the proposed Hollandmey Renewable Energy Development (RED) (hereafter the 'proposed Development') Environmental Impact Assessment (EIA) Report.
- 1.1.2 It presents an assessment of the potential implications of the proposed Development on deer with reference to current NatureScot guidance (SNH, 2016<sup>1</sup>) and includes consideration of deer welfare and the indirect impacts on other interests including habitat reinstatement, neighbouring land, public roads and qualifying interests of designated sites for nature conservation.

## 1.2 Objectives

- 1.2.1 The objectives of the assessment are to:
- Outline baseline information pertaining to deer and deer management within the Site;
  - Identify potential issues and impacts on deer arising from the proposed Development; and,
  - Identify the requirement or otherwise for deer management measures to be implemented as part of the proposed Development.

# 2 BASELINE

- 2.1.1 This Section should be read with reference to the following:
- **Figure 8.1: Statutory Designated Sites for Nature Conservation** and **Figure 8.2: Phase 1 Habitat Management Plan** presented in **Volume 3** of the EIA Report; and
  - **Figure 1: Site Location and HMP Area**, presented in **Volume 4** of the EIA Report within **Technical Appendix 8.6: Draft Habitat Management Plan**.

## 2.2 Site Overview

- 2.2.1 The Site is located approximately 8 km to the south east of Dunnet Head in Caithness, Scotland. The Hamlet of Mey lies to the north of the Site.
- 2.2.2 The Site largely comprises maturing commercial forestry plantation woodland and areas of recently felled woodland, interspersed with bog and grassland habitats (see **Figure 8.2** of the EIA Report), which are grazed in parts with sheep and cattle. The surrounding landscape comprises similar open moorland, used in parts for rough grazing and woodland plantations.
- 2.2.3 The Phillips Mains Mire Site of Special Scientific Interest (SSSI), designated by virtue of its blanket bog and dubh lochan interests occupies the north eastern extent of the Site. The Caithness and Sutherland Peatlands Special Area of Conservation (SAC) and Ramsar site and the Stroupster Peatlands SSSI,

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<sup>1</sup> SNH (2016) Planning for development: What to consider and include in deer assessments and management at development sites. Scottish Natural Heritage, Inverness.

designated by virtue of their sensitive peatland habitat interests and fauna are also located adjacent to the Site (see **Figure 8.1** of the EIA Report).

2.2.4 Further details of the Sites proximity to statutory designated sites for nature conservation are provided in **Chapter 8: Ecology and Biodiversity**, of the EIA Report.

## 2.3 Deer Species

2.3.1 In review of the latest British Deer Society (BDS) Deer Distribution Survey (2016<sup>2</sup>), roe deer *Capreolus capreolus* and red deer *Cervus elaphus* are the principal deer species occurring in the Caithness area, with sika deer *Cervus nippon* also recently reported as present.

2.3.2 In consultation, the Highland Biological Recording Group (HBRG) returned existing records of roe deer in proximity to the Site, with observations of roe deer also occasionally made over the course of ecological field survey visits.

2.3.3 The appointed Deer Controller for the Site confirms that roe deer comprise the predominant species that utilises the Site and immediate surrounds. In 2020, a single red deer stag was recorded on the Site, although the presence of which had not previously been known.

## 2.4 Local Deer Populations

2.4.1 In the absence of detailed population counts for the Site, current NatureScot guidance (SNH, 2016) suggests that deer densities of <3-5 deer/km<sup>2</sup> are likely to be appropriate for woodland establishment and blanket bog sites.

2.4.2 On the basis that the Land Manager does not report implications for woodland establishment at the Site<sup>3</sup>, and the Latest Assessed Condition of the Phillips Mains Mire SSSI Blanket bog feature is reported as being favourable maintained with evidence of low grazing pressure<sup>4</sup>, a maximum baseline density estimate of 3 deer/km<sup>2</sup> for the Site is adopted as an appropriate and precautionary estimate for the Site and which is considered to be low.

## 2.5 Sources of Shelter and Grazing Opportunities within the Site

2.5.1 The mature coniferous plantation woodlands within the Site do provide shelter opportunities for deer, with pockets of bog and grassland habitats also providing some, but limited and fragmented grazing opportunities.

2.5.2 The area of recently felled woodland in 2019 (see **Figure 8.2** of the EIA Report) currently provides poor sheltering opportunities for deer, but may in due course, following re-planting (undertaken in 2020 and continuing in 2021), provide attractive browsing opportunities in the short-term and shelter opportunities in the long-term following maturity.

2.5.3 Deer are not currently excluded from entering the Site from the surrounding area by deer fencing. The appointed Deer Controller does however, report that stock fencing of areas for rough livestock grazing within the Site appears to have resulted in a decrease in use by roe deer of these grassland areas.

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<sup>2</sup> <https://www.bds.org.uk/science-research/deer-surveys/deer-distribution-survey/> [Accessed 17<sup>th</sup> February 2021].

<sup>3</sup> There is an abundant evidence of naturally regenerating lodgepole pine *Pinus contorta* along forestry rides near recently felled areas with little or no damage. Similarly, abundance evidence of naturally regenerating seedlings of Sitka spruce *Picea sitchensis* and lodgepole pine on recently felled areas.

<sup>4</sup> SNH (2010) Phillips Mains Mire Site of Special Scientific Interest: Site Management Statement. Dated 25<sup>th</sup> March 2010.

## **2.6 Sources of Shelter and Grazing Opportunities outwith the Site**

2.6.1 Lands immediately adjacent to the Site and within the wider surrounding area are characterised by extensive open areas of grassland, moorland and bog habitats. Areas of woodland plantation occur to the south of the Site, south of Slickly and Howe and west of Loch of Wester.

2.6.2 Opportunities of grazing and shelter for deer are therefore extensive locally.

## **2.7 Local Deer Management Group and Management Plan**

2.7.1 The Site and majority of the surrounding Caithness area does not comprise part of a Deer Management Area (DMA) and is not covered by any Deer Management Group (DMG)<sup>5</sup>.

## **2.8 Current Deer Control**

2.8.1 Deer control within the Site is undertaken by the appointed Deer Controller who holds a DSC 1 with Trained Hunter status.

2.8.2 Deer control within the Site aims to maintain deer numbers within the Site low enough to ensure maximum natural regeneration of tree stocks. Effort has however reduced in more recent years on account of (1) decreased used of previously grazed areas due to livestock presence (2) harvesting of trees and, (3) increased control efforts prior to harvesting.

2.8.3 Cull numbers reported for the most recent four-year period are as follows:

- 2017-2017: 24 deer;
- 2018-2019: 22 deer;
- 2019-2020: 18 deer; and
- 2020-2021: 8 deer.

2.8.4 Deer control measures are currently established as being effective at maintaining onsite populations at levels capable of enabling successful woodland establishment and creating sustainable and low grazing pressures on the Phillips Mains Mire SSSI blanket bog feature c.3 deer/km<sup>2</sup>.

## **2.9 Future Baseline**

2.9.1 In the absence of the proposed Development, deer control on the Site would continue on its current form to maintain populations of c.3 deer/km<sup>2</sup>.

2.9.2 The availability of shelter opportunities within the Site would remain unchanged, at least for the short term and until recently planted woodland matures. No further large-scale felling is currently proposed in the absence of the proposed Development.

2.9.3 The availability of grazing opportunities would similarly remain unchanged, with attractive additional browsing opportunities provided, at least in the short term, through recently planted restock.

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<sup>5</sup> <https://www.deer-management.co.uk/dmgs/deer-management-groups/deer-management-group-map/> [Accessed 17 February 2021].

### 3 POTENTIAL IMPLICATIONS FOR DEER

3.1.1 Potential impacts upon deer resulting from the proposed Development comprise the following:

- Direct loss of shelter opportunities;
- Direct loss of foraging habitat;
- Displacement of deer onto adjacent land (incl. road networks and statutory designated sites for nature conservations); and
- Impacts upon habitat restoration following the construction phase of the scheme.

#### 3.2 Loss of Shelter Opportunities

3.2.1 The proposed Development will result in the direct loss of approximately 24.3 ha of woodland habitats within the Site to facilitate the installation of infrastructure and access and which may otherwise provide shelter for deer.

3.2.2 As part of the proposed Developments Habitat Management Plan (HMP) (see **Technical Appendix 8.6** of the EIA Report) an additional 88.4 ha of woodland habitats will also be cleared (including planting within the recently felled area) within the Site to deliver bog and peatland habitat restoration works.

3.2.3 Compensatory planting is therefore not proposed as part of the proposed Development, with cleared areas being subject to targeted management for peatland restoration as detailed within the proposed Developments HMP.

3.2.4 The long-term loss of shelter opportunities within the Site from woodland felling associated with the proposed Development, and resulting from clearance for infrastructure and HMP proposals is very small, representing 22% of the total current (unmatured) woodland habitat within the Site.

3.2.5 This is not considered would not result in an adverse impact upon local deer populations.

#### 3.3 Loss of Foraging Habitat

3.3.1 The proposed Development will result in the direct and permanent loss of approximately 45.5 ha of bog and grassland grazing resources for deer from within the Site. Such losses are considered to be very small relative to their remaining extent within the Site. The availability of similar habitats within the immediate and wider surrounding area, available for deer, is also extensive.

3.3.2 The proposed Development does not include for the erection of any temporary or permanent deer fencing to exclude deer from the Site. Local deer populations will therefore continue to be able to move freely within the Site and around the proposed Development infrastructure following the completion of construction works.

3.3.3 Given the very small extent of potential foraging habitat loss, grazing resources for deer populations within the Site and local area, will not be adversely affected by the proposed Development.

## 3.4 Displacement

- 3.4.1 Research does suggest that deer are not particularly disturbed by the presence of operational wind turbine scheme (Helldin *et al.*, 2012<sup>6</sup> and Reksten, 2016<sup>7</sup>), but do have the potential to be temporarily displaced during the operational maintenance works. Such events are however unlikely to be frequent or prolonged and as such would not result in any permanent displacement pressures on adjacent land.
- 3.4.2 Construction activities are expected to last approximately 18 months and would be phased across the Site. Decommissioning works would be expected to occur over a similar timeframe, if not shorter. During construction and decommissioning works, deer have the potential to be displaced from parts of the Site depending upon the location of works.
- 3.4.3 This may reasonably result in the relocation of some grazing activities to other parts of the Site away from construction areas, or deer seeking shelter and grazing opportunities in habitats outwith the Site including adjacent statutory designated sites for nature conservation.
- 3.4.4 Due to the relatively low numbers of deer likely to be affected, the localised nature of construction and decommissioning works and the extent of available habitats within the wider area which have the capacity to accommodate local deer populations, the displacement of deer from the Site is unlikely to exert any substantial additional grazing pressured onto alternative habitats adjacent to the Site.
- 3.4.5 Significant increases in grazing pressures on qualifying habitat features of the Stroupster Peatlands SSSI and Caithness and Sutherland Peatlands SAC and Ramsar site, are therefore not predicted to occur.
- 3.4.6 Deer numbers within the Site would also continue to be controlled by the Land Manager at levels needed to ensure continued woodland establishment and which would ensure sustainable grazing levels for blanket bog habitats, including within the Phillips Mains Mire SSSI, are maintained.
- 3.4.7 The potential for the displacement of deer onto adjacent roads, notably the A836 to the north of the Site is also considered to be limited due to the low numbers of deer likely to be affected by disturbances associated with the construction, operation and decommissioning of the proposed Development. No anticipated change to existing deer numbers crossing the local road network and potential for Deer Vehicle Collisions (DVCs) is therefore anticipated.
- 3.4.8 In summary, the potential for impacts upon adjacent lands and interests as a result of deer displacement from the Site is considered to be limited and unlikely due to the low numbers of deer to be affected and the temporary nature of potential disturbance events.

## 3.5 Pressures on Habitat Reinstatement and Enhancement Measures

- 3.5.1 Enhancement measures, provided as part of the HMP would remain in place throughout the operational phase, subject to periodic review in accordance with any emerging best practice management advice. The restoration of 168 ha of commercial forestry to blanket bog represents a considerable net gain over the predicted loss of 10.05 ha of this habitat for the proposed Development. There will also be indirect beneficial effects for the Phillips Mains Mire SSSI, as removal of tree cover surrounding the site and rewetting of the underlying peatlands will reduce any drying effects associated with the forestry, thereby protecting the hydrological unit and the Favourable

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<sup>6</sup> Helldin, J.O., Jung, J., Neumann, W., Olsson, M., Skarin, A., Widemo, F. (2012) The impacts of wind power on terrestrial mammals. The Swedish Environmental Protection Agency, Sweden.

<sup>7</sup> Reksten, S.S., (2016). The effect of a wind farm on native vegetation and area use of three cervid species – A case study in the planning and ecological effects of constructing a wind power plant in Southern Norway. Master's Thesis, The Department of Ecology and Natural Resource Management.



condition status of the site. As such, the HMP is expected to provide significant beneficial effects associated with the proposed Development in the long-term, particularly when contrasted with a future baseline of continuing commercial forestry operations.

- 3.5.2 The construction phase of the proposed Development will result in indirect habitat losses due to disturbance within working areas around the permanent development footprint. These habitats will largely reinstate over time, following the cessation of construction works.
- 3.5.3 Following the cessation of construction and habitat reinstatement works, access for deer to the Site will be retained. Grazing pressures may therefore inhibit effective restoration of disturbed habitats within working areas and impede habitat creation measures.
- 3.5.4 Deer control on the Site is currently “ad-hoc”. Such control would however be continued in the absence of the development to maintain deer densities at levels suitable for woodland establishment and which in turn provide sustainable densities and low grazing pressures for blanket bog habitats. The formation of access tracks within the Site as a result of the proposed Development, will also serve to increase the efficiency of current stalking activities.
- 3.5.5 Current deer density estimates of <3-5 deer km<sup>2</sup>, would therefore be reasonably maintained.

### **3.6 Death or Injury**

- 3.6.1 Some temporary, open excavations may be created as part of the proposed development within suitable foraging areas. These excavations should be covered outside work hours to ensure that no animal, including deer fall into it. If excavations are left open, boards should be positioned so that any animal can escape.
- 3.6.2 Further details are provided in **Chapter 8: Ecology and Biodiversity**, and **Technical Appendix 3.1: Outline Construction Environment Management Plan** of the EIA Report.
- 3.6.3 The potential for deer collision with plant machinery or vehicles within the Site as part of construction, decommissioning and operational activities for the proposed Development will also be avoided through adherence to on-site speed limits as detailed within **Technical Appendix 3.1** of the EIA Report.

## **4 RECOMMENDATIONS FOR DEER MANAGEMENT MEASURES**

- 4.1.1 Due to the low populations of deer present within the Site, the relatively small extent of permanent habitat loss as a result of the proposed Development, and the localised and temporary nature of potential displacement works, no additional deer control measures are considered necessary to ensure the welfare of deer within the Site or avoid pressures on sensitive habitats and interests within or surrounding the Site.
- 4.1.2 Current deer control undertaken by the appointed Deer Controller, which will maintain suitable conditions for woodland establishment and maintain low grazing pressures on sensitive blanket bog habitats within the Site, will continue in its current form.
- 4.1.3 Monitoring as part of the HMP will however seek to identify and establish the cause of failure of habitat creation efforts if this is considered to be occurring, including any evidence of grazing pressures from deer.
- 4.1.4 In the event this confirmed to be the case the HMP would remain adaptable to include the production of a Deer Management Strategy for the HMP (within the Site) if required. The DMS would be agreed in consultation with The Highland Council (THC), NatureScot and the Land Manager, together with adjacent interest parties.



## 5 REFERENCES

SNH (2016) Planning for development: What to consider and include in deer assessments and management at development sites. Scottish Natural Heritage, Inverness

<https://www.bds.org.uk/science-research/deer-surveys/deer-distribution-survey/> [Accessed 17th February 2021]

SNH (2010) Phillips Mains Mire Site of Special Scientific Interest: Site Management Statement. Dated 25th March 2010

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Helldin, J.O., Jung, J., Neumann, W., Olsson, M., Skarin, A., Widemo, F. (2012) The impacts of wind power on terrestrial mammals. The Swedish Environmental Protection Agency, Sweden

Reksten, S.S., (2016). The effect of a wind farm on native vegetation and area use of three cervid species – A case study in the planning and ecological effects of constructing a wind power plant in Southern Norway. Master's Thesis, The Department of Ecology and Natural Resource Management