

Appendix 5.6 Deer Management Plan

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Appendix 5.6 Deer Management Plan

5.1 Introduction

- 5.1.1 The Proposed Development has potential connectivity with Levishie Wood Site of Special Scientific Interest (SSSI). Impacts could involve the temporary displacement of red deer (*Cervus elaphus*) from the Proposed Development into the designated nature conservation site. This deer management plan includes measures to mitigate adverse impacts on the SSSI and takes into account deer management on neighbouring land and the Operational Development to ensure the objectives are complimentary, particularly with the Operational Development Deer Management Plan, included as Appendix 5.8, and the Glenmoriston Deer Management Group (GDMG) Deer Management Plan (Boulton, 2016).
- 5.1.2 The Operational Development Deer Management Plan covers the area of Bhlairidh Wind Farm, whereas the wider estate and neighbouring lands are covered by the GDMG Deer Management Plan, which includes a total of 13 estates and covers an area of approximately 40,000ha. The plans apply an integrated approach to managing deer that maintains population numbers for sporting activities while ensuring long-term sustainability.
- 5.1.3 The Proposed Development covers an area of approximately 1,107ha and sits within the larger land ownership of Glenmoriston Lodge Estate within the GDMG area. Access to the Proposed Development is also taken through Glenmoriston Lodge Estate. Glenmoriston Lodge is an active sporting estate with renewable energy interests in the form of hydroelectric and wind farm developments.
- 5.1.4 Construction of the Proposed Development is expected to start in 2025 and the wind farm is planned to become operational in 2026.

5.2 Objectives of the Deer Management Plan

- 5.2.1 This deer management plan has been completed following best practice guidance from Scottish Natural Heritage (SNH, 2019). The purpose of the plan is:
- To summarise the potential impacts upon Levishie Wood SSSI from the temporary displacement of deer.
 - To outline the mitigation measures proposed to manage the potential impacts of the Proposed Development by which significant adverse effects on the qualifying interest species of Levishie Wood SSSI would be avoided or reduced to non-significant levels.
 - To maintain a healthy red deer population as part of the overall estate management in order to provide sporting opportunities, while maintaining open moorland and blanket bog in good condition.

5.3 Baseline

Levishie Wood SSSI

- 5.3.1 The qualifying interest of Levishie Wood SSSI is upland birch woodland and the site supports one of the largest birch-juniper woodlands in Inverness-shire. However, the upland birch woodland is considered to be in unfavourable condition based on monitoring completed by SNH in 2015. The main negative pressure on the habitat is considered to be deer grazing.
- 5.3.2 The SSSI occurs 1.4km to the south of the Proposed Development at its closest point and is separated from the Proposed Development by small hills and open moorland.

Deer Species and Numbers

- 5.3.3 Red deer is the most dominant species in the field study area and were recorded during surveys undertaken in 2019 to inform the Environmental Impact Assessment Report (EIA Report) of the Proposed Development. The red deer population within the field study area is monitored through annual deer counts by estate staff, as detailed in Table 5.6.1. Sika deer (*Cervus nippon*) are also known to be present in the field study area from previous deer counts by estate staff.

Table 5.0.1 –Red Deer Counts¹

Year	Stags	Hinds	Calves	Totals	Deer Density (deer/km ²) ²
March 2016	91	313	100	504	12.6
March 2021	75	310	104	489	12.2

- 5.3.4 Data collected by the GDMG, as described in Appendix 5.8, suggests deer movement is constrained by the River Moriston and Loch Cluanie to the south, with deer generally moving north to south and seasonally moving from east to west (Boulton, 2016). Deer numbers peaked in 2009 and have shown a slight decline in the following years.
- 5.3.5 The 2016 and 2021 aerial survey shows deer distribution as concentrated on the middle and lower ground. However, further pers. comm. with the estate suggests deer are generally present on the Operational Development and on the area of the Proposed Development during daylight hours, with movement to the south of the Allt Saigh towards preferred grazing fields beyond Levishie Wood at night. Deer are fed during the winter in the field study area, including locations along the main access track to the Site and close to the boundary of Levishie Wood. Deer stalking is undertaken on foot and does not take place from vehicles.

5.4 Potential Impacts

- 5.4.1 Construction of the Proposed Development may lead to the localised, short-term and temporary displacement of red deer onto other areas of the estate which may include Levishie Wood SSSI, which would cease following the completion of construction each day. There are, however, a number of factors that, considered collectively, would suggest displacement onto Levishie Wood SSSI would be of low magnitude, including:
- Construction activities will be localised rather than comprising the entirety of the Proposed Development. Any displacement is therefore unlikely to be wide scale in nature, allowing much of the Proposed Development to still be available to deer.
 - There is a distinct day versus night distribution in deer across the estate, with deer preferring the high ground and middle grazing fields around the existing access track during the day, moving south towards the lower ground and grazing fields beyond Levishie Wood SSSI at night. There is considered sufficient alternative high ground (i.e. the Operational Development and areas of the Proposed Development where construction activities are not taking place) and middle ground that will remain undisturbed (i.e. no increase in typical activities) during the period of construction to ensure that deer would not be displaced entirely from this area.

¹ Data on the annual deer counts was provided by the Applicant.

² The deer densities differ slightly from the densities recorded by NatureScot's annual count as the estate ground covers 4,000ha, not the 3,508ha noted in NS's map and calculations.

- During periods of adverse weather, deer move off the high ground to concentrate in the middle ground of the estate around the existing access track. Deer are also fed during the winter along the existing access track and close to the boundary of Levishie Wood SSSI. This supplementary feeding encourages deer to concentrate in this area, away from the higher ground and any potential disturbance from the Proposed Development.
- Deer are not culled from vehicles on the estate, so are not wary of vehicular traffic. Deer are also habituated to some degree of vehicle movements from the Operational Development. It therefore cannot be assumed that all activities would be equally disturbing to deer across the Proposed Development.

5.4.2 It is considered that any displacement from the Proposed Development is most likely to occur onto the Operational Development and the other areas of high and middle ground available to deer, however there does remain a possibility that increased deer movements could occur towards Levishie Wood SSSI. During the period of displacement, the upland birch-juniper woodland in the SSSI could be damaged by trampling and grazing. As the woodland is already considered to be in unfavourable condition due to a range of factors, including deer grazing, any further displacement of deer resulting in grazing pressure on the SSSI, even at a low magnitude, is considered likely to result in a **significant adverse effect**.

5.4.3 Management and maintenance of the Proposed Development during the operational phase in the medium-term is not considered to lead to significant deer displacement as personnel activity would be low, vehicle speed limits would be controlled and the deer in the field study area are considered to have some habituation to operational levels of human activity due to the presence of the Operational Development. Deer quickly adapt to activities that pose no threat and are likely to remain in the field study area during operation.

5.4.4 In the longer-term, decommissioning of the Proposed Development, through dismantling and removal of turbines and other infrastructure and habitat reinstatement, is likely to lead to a similar displacement effect as that experienced during construction activities.

5.5 Mitigation and Enhancement Measures

5.5.1 The monitoring of deer movement and counts will continue to be undertaken by estate staff as part of their overall duties and the information provided will be used to manage cull levels. Engagement with neighbours on the surrounding estates through the GDMG will also continue to ensure deer management measures are complementary and collaborative.

Minimising Deer Disturbance and Mortality

5.5.2 Measures to reduce the disturbance and potential mortality of deer will be undertaken during construction of the Proposed Development. The following measures are proposed:

- Follow general guidance and specific objectives in the Operational Development Deer Management Plan, provided as Appendix 5.8.
- Restrict construction traffic to the construction site boundary.
- Minimise deer vehicle collisions and disturbance by restricting speed limits to 15mph within the Proposed Development.
- Remove deer fencing around suitable established native woodland areas (where possible), as shown on Figure 5.11, to provide additional areas for deer that they previously were not given access to.

Cull Plan

5.5.3 Annual cull targets will be extended to include the area of the Proposed Development. Current annual cull targets for the Operational Development are 25 hinds, 30 stags and 15 calves, as detailed in Appendix 5.8. Final annual cull targets for the Proposed Development will be in line with the

GDMG Deer Management Plan (Boulton, 2016) and agreed with relevant stakeholders, such as Glenmoriston Lodge Estate. The overall aim will be to work towards a target of 10 deer/km². Historic cull returns are provided in Table 5.6.2.

Table 5.0.2 –Red Deer Historic Cull Returns

Year	Stags	Hinds and Calves	Totals
2016/17	44	42	86
2017/18	37	73	110
2018/19	28	49	77
2019/20	22	55	77
2020/21	18	86	104

Levishie Wood SSSI Condition Monitoring

5.5.4 A baseline survey of herbivore impacts was completed by Applied Ecology in March 2018 within Levishie Wood SSSI (Applied Ecology, 2018). Twenty-eight sampling points were surveyed, with more than half of the trees and bushes showing signs of grazing by deer. Significantly fewer silver birch (*Betula pendula*) were grazed in comparison to juniper (*Juniperus communis*). The results suggested that herbivore impacts were at a moderate level.

5.5.5 The monitoring protocol will be extended for the Proposed Development. The report produced by Applied Ecology will be used as the established baseline to be compared with the future monitoring results. The condition of the sampling points will be monitored annually during construction of the Proposed Development then at least every five years in early spring following the completion of construction. The monitoring protocol will be managed and coordinated by the Applicant’s Environmental Advisor, with surveys undertaken by suitably qualified ecological consultants managed by the Applicant’s Environmental Advisor. Survey methodology, including the statistical tests, will remain consistent with the baseline survey previously undertaken (Applied Ecology, 2018). A report will be produced at the end of each monitoring year and will be provided to The Highland Council (THC) and NatureScot (NS). Should a deterioration in condition of the vegetation from deer grazing in Levishie Wood SSSI be identified during these monitoring surveys, measures will be agreed between the Applicant, the Estates and other statutory parties.

5.6 Amendments

5.6.1 This deer management plan is a live document and will be updated following monitoring results, unexpected events or changes in guidance. Approval by THC and NS will be sought for any amendments before revised measures are implemented.

5.7 References

Applied Ecology (2018). *Bhlaraidh Wind Farm – Herbivore Impacts on Levishie Woodlands SSSI - Baseline Survey*. AELSC0215.

Boulton, A. (2016). *Glenmoriston Deer Management Group Deer Management Plan 2016-2026 (with mid-term review 2021)*. Available at: https://glenmoristondmg.deer-management.co.uk/wp-content/uploads/2017/11/GMPlan2016_Final-Draft-amended_301116_v4.1.pdf. Accessed on: 08 March 2021.

SNH (2019). *Managing Deer*. Available at: <https://www.nature.scot/professional-advice/land-and-sea-management/managing-wildlife/managing-deer>. Accessed on: 08 March 2021.