

## Technical Appendix 8.5: Peatland Compensation

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## 1.0 Introduction

This Technical Appendix has been prepared to accompany the Oliver Forest Wind Farm ('the Proposed Development') Environmental Impact Assessment (EIA) Report.

It presents information into the priority peatland (M19a) on-site, losses of priority peatland as a result of the Proposed Development and compensation areas for peatland restoration.

Annex A provides information on the priority peatland (M19a) on-site and losses of the M19a habitat as a result of the Proposed Development. Figure 8.12a shows the priority peatland (M19a) on-site, and Figure 8.12b shows the loss of priority peatland (M19a) on-site.

## 2.0 Peatland Restoration for Compensation Requirements

As a result of the Proposed Development, 2.01 ha of priority peatland would be lost (direct/indirect). As per NatureScot guidance (2023), the loss of priority peatland should be offset with the restoration of a considerably greater area of priority peatland. Section 3 of this Technical Appendix details the peatland restoration to be adopted on-site, which equates to a total of 10.04 ha peatland being restored.

## 3.0 Peatland for Restoration On-site

Table 1 details the available restorable priority peatland identified on-site. These areas are shown in Figure 8.12c.

**Table 1 - Peatland (M19a and M25) for compensation (as shown on Figure 8.12c).**

Area (from Figure 8.12c)	NVC Community	Total Area (ha)	Notes
Forest to Bog Restoration Area (Green Areas)	Current commercial forestry	2.04	Area to be felled for the Proposed Development and not re-stocked and used for 'peatland' restoration. These areas are all on deep peat ( $\geq 0.5$ m).
Peatland Restoration Area (Purple Area, north-west of Weird Law)	M19a	1.28	Area of M19a was assessed as not a national interest peatland (see Technical Appendix 8.1 and polygon '1' on Figure 8.6b) with encroachment of woodland/forestry/scrub identified. The area has potential for restoration.
Peatland Restoration Area (Purple Area, in south)	Within M19a	1.12	Three remnant areas of commercial forestry/scrub within the peatland. There is further establishment of conifer scrub/saplings within the M19a area. There is therefore potential for peatland restoration of at least 1.12 ha of habitat encroached with conifers/scrub.
Peatland Restoration Area Glenmuck Bog Local Wildlife Site (LWS) (Hatched Pink Area)	M19a, M25 (& mosaic)	5.6	Within Glenmuck Bog LWS there is considerable potential for peatland restoration. An area of M19a within the LWS was assessed as not a national interest peatland (see Technical Appendix 8.1 and polygon '3' on Figure 8.6b) with encroachment of woodland/scrub identified. There are also restorable areas of M25 (and mosaics), within this identified area.
<b>Total</b>		<b>10.04</b>	

The peatland areas for compensation identified in Table 1 are discussed below.

### 3.1 Forest to Bog Restoration

A total of 2.04 ha areas of commercial forestry to be clear-felled which are on deep peat ( $\geq 0.5$  m) were identified as areas for peatland/bog restoration (see Figure 8.12c). Note, it is likely that the clear-felled areas extending out from the 2.04 ha will also be managed similarly (at least peripheral areas to those identified in Figure 8.12c) so 2.04 ha of restorable peatland is considered a likely underestimate for the extent of the forest to bog restoration areas.

The most appropriate measures for the forest to bog restoration on-site will be agreed in consultation with the Scottish Borders Council (SBC) and additional relevant stakeholders, which will result in the removal of existing commercial forestry while ensuring the limitation of disturbance of underlying habitat/peat. Sapling and seedling control will also be adopted, with all measures aiming to restore the underlying peatland habitat. Measures

including 'stump-flipping' and ground-smoothing<sup>1</sup> will be discussed through consultation, as appropriate measures to minimise re-establishment of commercial saplings.

An initial trial period of up to five years from implementation is suggested, after which the effectiveness of or requirement for additional measures and their frequency would be re-assessed in consultation with SBC (and additional relevant stakeholders).

The frequency of sapling removal and control measures and monitoring for the initial trial period would be agreed in consultation with SBC (and additional relevant stakeholders) prior to implementation.

## 3.2 Peatland Restoration Areas

Four areas have been identified as peatland habitats (M19a) but with encroaching forestry/scrub (as shown in Figure 8.12c). Encroaching forestry/scrub can deplete peatland habitats through for example drying out and shading effects. Clearance of encroaching scrub and forestry in these identified areas would signify tangible restoration measures.

An initial trial period of up to five years from implementation is suggested, after which the effectiveness of or requirement for additional measures and their frequency would be re-assessed in consultation with SBC (and additional relevant stakeholders).

The frequency of sapling removal and control measures and monitoring for the initial trial period would be agreed in consultation with SBC (and additional relevant stakeholders) prior to implementation.

Peatland areas within the Glenmuck Bog LWS have also been identified as restorable (see Figure 8.12c, as 5.6 ha in hatched pink area). Note, part of the Glenmuck Bog LWS is also identified as being restored for enhancement requirements (and this is discussed in Technical Appendix 8.6).

A number of factors were identified during baseline surveys of resulting in a degrading effect on the Glenmuck Bog LWS, including the presence of a ditch, encroachment from commercial forestry and deer grazing.

The measures (which are also provided in Technical Appendix 8.6) are therefore to be implemented to restore the peatland habitats on-site:

- blocking and infilling of the ditch present;
- managing deer numbers in Glenmuck Bog (likely through the use of exclusion fencing, or increased culling, and should be agreed with stakeholders and the success of the measure reviewed as part of the monitoring);
- control of Sitka spruce scrub that is encroaching on the bog habitats; and
- bracken control within the eastern spur of Glenmuck Bog that follows the burn in the east.

Note, it is proposed that with the above measures, 5.6 ha of peatland habitat (M19a, M25, and M25 mosaic) would be restorable for compensation, and 3.62 ha of M25 mosaic restorable for enhancement (see Technical Appendix 8.6 for enhancement gains), and thus the benefits (for compensation and enhancement) are not mutually exclusive. As such, a total of 9.22 ha within the Glenmuck Bog LWS will be restored, with 5.6 ha of this being restored for the purpose of compensation.

The restoration measures will be monitored on a regular basis for an ongoing period during the operational phase of the Proposed Development. An initial trial period of up to five years from implementation is proposed, after which the effectiveness of the measures will be re-assessed in consultation with SBC (and additional relevant stakeholders) and whether the frequency of further monitoring in years 10 and 15 is appropriate. The details will be included within the NEMP to be agreed but will likely include recording key features/indicators of the bog (following NatureScot's peatland condition assessment<sup>2</sup>), to appraise the condition of the peatland (compared to baseline conditions), and repeated surveys over, at least part of, the Proposed Development's lifespan and whether any remedial works are required. The programme will be agreed through consultation with NatureScot and the SBC. Survey results will be shared with NatureScot and the SBC to provide updated information for condition assessments of the non-statutory site.

<sup>1</sup> <https://www.nature.scot/doc/peatland-action-technical-compendium-restoration-8-forest-bog-restoration#:~:text=Stump%20flipping%20is%20a%20ground,the%20back%20of%20the%20bucket>. (Accessed 18 June 2024).

<sup>2</sup> <https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management> (Accessed 6 June 2024).

## 4.0 References

NatureScot (2023). *Advising on peatland, carbon-rich soils and priority peatland habitats in development management*. November 2023.

## ANNEX A – ON-SITE PEATLAND AND LOSSES

**Table A1-1: ‘Priority’ peatland habitat on-site (as shown on Figure 8.12a).**

ID no. (from Figure 8.6b)	NVC Community <sup>3</sup>	Total Area (ha)
1 (not national interest <sup>4</sup> )	M19a	1.28
2 (possible national interest – small)	M19a	0.26
3 (not national interest)	M19a	1.43
4 (not national interest)	M19a	0.58
5 (possible national interest)	M19a	11.18
6 (possible national interest – small)	M19a	0.62
-	M19a	20.84
<b>Total</b>	-	<b>36.18</b>

**Table A1-2: Direct loss of priority peatland on-site from the Proposed Development (as shown on Figure 8.12b).**

ID no. (from Figure 8.6b)	NVC Community	Total Area (ha)
5 (possible national interest)	M19a	0.72
6 (possible national interest – small)	M19a	0.0001
-	M19a	0.04
<b>Total</b>	<b>M19a</b>	<b>0.76</b>

**Table A1-3: Indirect loss of priority peatland on-site from the Proposed Development (as shown on Figure 8.12b).**

ID no. (from Figure 8.6b)	NVC Community	Total Area (ha)
1 (not national interest)	M19a	0.03
2 (possible national interest – small)	M19a	0.04
5 (possible national interest)	M19a	0.98
6 (possible national interest – small)	M19a	0.03
-	M19a	0.17
<b>Total</b>	<b>M19a</b>	<b>1.25</b>

<sup>3</sup> NVC codes are provided in Figures 8.6a and 8.14a, and fully defined in Chapter 8.

<sup>4</sup> Note, these are taken from the peatland condition assessment carried out as detailed in Technical Appendix 8.1.

# FIGURES