# Carn Fearna Wind Farm Technical Appendix 8.5: Outline Nature Enhancement Management Plan





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# **1** INTRODUCTION

### 1.1 Overview

- 1.1.1 This Technical Appendix provides the enhancement measures that would be implemented for the Carn Fearna Wind Farm (the 'Proposed Development'). Mitigation measures that would be adopted are detailed in **Chapter 8: Ecology** and **Chapter 9: Ornithology**.
- 1.1.2 This Technical Appendix (Outline Nature Enhancement Management Plan (ONEMP)) has been prepared to accompany **Chapter 8** of the Proposed Development EIA Report.
- 1.1.3 This ONEMP accords with the National Planning Framework 4 (NPF4) policies which are relevant to developments proposed on peatland, carbon-rich soils and priority peatland.
- 1.1.4 The Proposed Development, together with this associated ONEMP, has been sensitively designed around the locations of deeper areas of peat (see EIA Report **Chapter 10**: **Geology, Hydrogeology, Hydrology and Peat**), and has minimised the loss of priority peatland of possible national interest. A key focus of Policy 3 of NPF4 is biodiversity enhancement through restoration of degraded habitats and strengthening nature networks, which this ONEMP delivers. Furthermore, NPF4 Policy 5 provides significant regard and protection for peatland and carbon-rich soils, with restoration of peatland habitats a key component. As such, peatland restoration of degraded habitats is proposed within the site.
- 1.1.5 This Technical Appendix presents outline nature enhancement management principles to be finalised in consultation with NatureScot and The Highland Council (THC) following receipt of planning consent and thereafter implemented as a Nature Enhancement Management Plan (NEMP) in accordance with a suitably worded condition of consent.
- 1.1.6 The finalisation of the ONEMP (into an agreed NEMP) would be completed prior to commencement of development, with the NEMP being implemented by the end of the first year of operation of the Proposed Development. After, the NEMP would remain in place as agreed, subject to monitoring of effectiveness, for the remaining operational lifetime of the Proposed Development as consented. A Steering Group and Review Committee (SGRC) comprising of NatureScot, THC and the Operator of the Proposed Development (and others) would be set up to oversee the effectiveness of the NEMP.
- 1.1.7 The NEMP would be prepared in line with relevant policy and guidance that would be applicable at the time of preparation and submission. The Applicant is committed to the delivery of appropriate nature enhancement, which accords with up-to-date guidance, during future ongoing development of the ONEMP, and subsequent NEMP.

### 1.2 Aims and Objectives

- 1.2.1 The purpose of the NEMP as implemented would be to ensure creation and ongoing management of habitats at the site to enhance biodiversity in accordance with the principles outlined in NPF4, Policy 3, the intent of which is to 'protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks', with the outcome that 'biodiversity is enhanced and better connected including through strengthened nature networks and nature-based solutions'.
- 1.2.2 The ONEMP includes five key aims to improve and enhance biodiversity at the site:
  - Enhancement of peatland habitats.
  - Enhancement of riparian habitats.
  - Improve opportunities for nesting birds and roosting bats.

- Improve habitats on-site for invertebrates.
- Enhance and increase native tree cover.

# 2 ON-SITE CONDITIONS AND THE PROPOSED DEVELOPMENT

- 2.1.1 The site is illustrated as the red line planning application boundary on **Figure 8.12**.
- 2.1.2 Detailed baseline habitat descriptions of the site are provided within EIA Report **Chapter 8**, and EIA Report **Technical Appendix 8.1: Habitats and Vegetation**. Information on the site is also provided in EIA Report **Chapter 2: Site Description and Design Evolution**, and with respect to the peat and hydrology interest on the site, within **Chapter 10**.
- 2.1.3 In summary, the site is upland in nature and comprises a mosaic of boggy, rough pasture, moorland with some heather, some early-stage woodland regeneration and some limited semi-mature forestry on its periphery. Mixed livestock (and deer) grazing within the site has resulted in a variety of sward lengths.
- 2.1.4 Within the site there is a total of 445.47 hectares (ha) of M17 and/or M19 peatland, of which 333.462 ha was identified as of possible national interest in accordance with NatureScot guidance criteria (NatureScot, 2023).
- 2.1.5 The condition of the peatland on-site is typically degraded with evidence of drainage, hagging, erosion and bare peat, and encroachment of invasive scrub and commercial conifer saplings. A lot of the peatland on-site is also part of habitat mosaics with other habitats, indicative that the peatland is drying out, as other habitats encroach and become established. Further information is provided in EIA Report **Technical Appendix 8.1**. Areas found with at least some of the above features which are indicative of degradation were selected as search areas for peatland restoration (see Aim 1).
- 2.1.6 The Proposed Development would result in the loss of relatively modest areas (in the context of the extent on-site, and the wider area) of Annex I and/or Scottish Biodiversity List (SBL) habitat, comprising of a total permanent loss of 24.478 ha. This comprises direct loss of 10.722 ha of M17/M19 peatland of possible national interest, 5.416 ha of M17/M19 peatland not of national interest, 8.219 ha of H10/H12a/M15 heath, and 0.121 ha of W4 woodland. In terms of indirect loss (10 m from the Proposed Development) and temporary loss (to be reinstated) of priority peatland of possible national interest this is an additional 14.038 ha (indirect loss) and 0.317 ha (temporary loss, to be reinstated)(see EIA Report **Chapter 8, Table 8.11**). Habitats which will be temporarily lost will be fully reinstated and therefore a total area of 24.76 ha of peatland of possible national interest would be lost (combined direct and indirect loss), which is 7.43 % of the respective peatland within the site.

# **3 OVERVIEW OF AIMS AND OBJECTIVES**

# 3.1 Approach to ONEMP

- 3.1.1 The Proposed Development has been designed to minimise potentially significant effects on sensitive ecological and ornithological features and peat reserves. A description of the Proposed Development is provided in EIA Report **Chapter 3: Description of the Development**.
- 3.1.2 Opportunities for restoration and enhancement of blanket bog have been identified and which in turn would aim to enhance the biodiversity, flood storage and carbon sequestration/storage of the site. Further enhancement works are proposed which would include improvement in the quality of habitats on-site (with subsequent benefits for wildlife like invertebrates), increasing nesting and foraging opportunities for wildlife, including birds and bats on-site, improving habitat connectivity through the site, and providing benefits to aquatic wildlife through riparian tree planting. These measures would

have multi-faceted benefits for biodiversity and would improve habitat connectivity and nature networks in, and through, the site.

- 3.1.3 Impacts on protected species or neighbouring habitats would be minimised during the implementation of the NEMP, and derogation licences would be obtained from NatureScot, if necessary.
- 3.1.4 The aims, objectives and habitat management measures outlined herein would be further refined and prescribed through detailed on-site investigation work and further consultation with NatureScot and THC, post-consent.

### 3.2 Accordance with NPF4

- 3.2.1 This ONEMP, and subsequent NEMP, accords with the NPF4 policies which are relevant to development proposed on peatland, carbon-rich soils and priority peatland. As well as tangible enhancements in terms of biodiversity and woodland/tree cover.
- 3.2.2 The Proposed Development is sensitive to the location of deeper areas of peat (see EIA Report **Technical Appendix 10.2 Peat Management Plan Figure 10.2.3a-f)**, as well as (where possible in the context of design constraints) priority peatland of possible national interest. A key focus of Policy 3 of NPF4 is that significant biodiversity enhancement through restoration of degraded habitats and strengthening nature networks is delivered. Furthermore, NPF4 Policy 5 provides significant regard and protection for peatland and carbon-rich soils, with restoration of peatland habitats a key component. As such, peatland restoration of degraded habitat is proposed within the site.
- 3.2.3 Losses to priority peatland habitat are considered in relation to NatureScot guidance (2023), with enhancement of priority peatland a requirement. However, it is considered that the specific enhancement requirements may be subject to change and would accord with the NatureScot guidance applicable at the time of consent of the Proposed Development. This is given the current NatureScot guidance (2023) is expected to be superseded and the new advice may materially alter the current requirements for enhancement.
- 3.2.4 The habitat enhancement measures will also enhance biodiversity on-site in accord with Policy 3 of the NPF4, through for example, restoring degraded habitats (including peatland habitats) and strengthening nature networks (such as through riparian tree planting) and connections between them.
- 3.2.5 NPF4 Policy 6 also states that *"development proposals that enhance, expand and improve woodland and tree cover will be supported"*. Furthermore, enhancement, improvement and/or planting of new trees will be integrated into the design. Tree planting is accordingly proposed for the Proposed Development both along existing commercial forestry in the west, and in terms of riparian tree planting.
- 3.2.6 Within this ONEMP, those watercourses to be targeted for riparian tree and woodland planting (as stated above), would improve aquatic conditions for wildlife, as well as providing shelter and foraging opportunities for bird species (like black grouse *Lyrurus tetrix*) and improving habitat connectivity for foraging and commuting bats. Riparian planting would also help slow waterflows to support flood risk management and can improve water body status, as stated by Scottish Forestry<sup>1</sup>.

# 3.3 Buglife Partnership

3.3.1 The Applicant has a partnership with UK charity Buglife – a conservation trust focusing on the protection and enhancement of invertebrates in the UK. Invertebrates are key to healthy ecosystems. From pollination, dispersing seeds, providing food for wildlife, recycling nutrients and cleaning water, insects and pollinators play a critical role in life on our planet; without them whole ecosystems would collapse.

<sup>&</sup>lt;sup>1</sup> <u>https://open-data-scottishforestry.hub.arcgis.com/datasets/96f7766709644e669de11d01b472bf40/explore</u> (Accessed 26/02/2025).

In a UK wide study, it was found that the UK's flying insect population has decreased by as much as 58.5 % in the last 20 years (Ball *et al.*, 2022), this decline could potentially be fatal for habitats and ecosystems across the UK as well as many ecosystem services we rely on. Resources available, as well as the extent of habitat restoration areas provided, mean that renewable energy projects can play a pivotal role in halting this dramatic decline. The partnership between Statkraft UK Ltd. and Buglife allows bespoke habitat management measures to be incorporated into this ONEMP (and subsequent NEMP, if the Proposed Development is consented), helping achieve sustainable populations of invertebrates locally and, in light of NPF4 Policy 3, support in delivering biodiversity enhancement within, and improving habitat connectivity through, the site.

## 3.4 Aim 1: Enhancement of Peatland Habitats

Objective 1: Promote Improved Structural Diversity and Condition of Blanket Bog

- 3.4.1 This objective would complement the Outline Peat Management Plan (EIA Report **Technical Appendix 10.2**) and mitigation commitments made in EIA Report **Chapter 10** in relation to using excavated soil and peat in site reinstatement at the end of the construction period. Vegetation cover would be reestablished as quickly as possible on track and infrastructure verges and cut slopes, by re-laying of excavated peat acrotelm, to improve slope stability and provide erosion protection. Additional methods, including hydroseeding and/or use of a biodegradable geotextile, would be considered, if necessary, in specific areas. Opportunities for habitat improvement to be considered include the following:
  - Reinstatement of (correctly stored) peat turves and vegetated peat divots.
  - Use of mulches or heather brash (or occasionally a biodegradable geotextile, like jute) and reseeding to protect areas of bare peat from further erosion.
  - Management of grazing by livestock and deer in sensitive areas (see below).
  - Re-profiling of peat hags, and hydroseeding if necessary and appropriate.
  - Ditch-blocking to promote re-wetting (where this is appropriate and would not interfere with estate management or operational activities of the Proposed Development).
  - Control of encroaching commercial conifer saplings, and bracken (*Pteridium aquilinum*).
- 3.4.2 The success of the habitat improvement and peat restoration activities would be monitored on a regular basis for an ongoing period during the operational phase of the Proposed Development. The details would be included in the final NEMP to be agreed by a suitable planning condition.
- 3.4.3 Areas termed 'Peatland Restoration Search Areas' in **Figure 8.12** have been identified as potentially suitable for restoration (through the presence of drains, encroaching scrub/conifer saplings, erosion and/or hagging). The Peatland Restoration Search Areas combined are 270.59 ha. These areas have been identified as areas potentially suitable for targeted peatland restoration based on reviewing satellite imagery, drone footage<sup>2</sup> and available peat data, as well as the data from habitat surveys, including peatland condition assessment (see EIA Report **Technical Appendix 8.1**). These are areas which have notably suffered from degradation, modification, erosion, and in some places, peat hagging and bare exposed peat. These Peatland Restoration Search Areas are a mix of areas identified as priority peatland of possible national interest, and other areas not of national interest (see EIA Report **Figure 8.4**), as well as an area of acid grassland/wet heath/bracken mosaic in the north-west of the site, but all with features

<sup>&</sup>lt;sup>2</sup> The drone survey methodology comprised a vantage point survey using a video transect technique (video resolution of 4k), which was considered the most appropriate method due to weather conditions and low cloud. The site was split into blocks using kml files and the site was surveyed by the drone being flown in these distinguished blocks. The drone specification used was DJI M30 and DJI Mavic 3 Pro.

considered potentially restorable by reinstating and improving the peatland/carbon-rich soil function of these areas. Note, most identified areas are well distanced (>500 m) from proposed turbines, where benefits for wildlife (such as ground-nesting waders) would be greatest. The areas for peatland restoration have also been identified with consideration given to the topography and degree of slope, with flatter areas most appropriate for restoration works.

3.4.4 Habitat enhancement measures are currently required over and above the peatland restoration needed for mitigation to offset for the loss of priority peatland (see EIA Report Chapter 8)'. This is expected as per current NatureScot guidance (2023) to be in the region of 10 % of the baseline assessment of the extent of priority peatland habitat present on the site. However, note this is subject to change given it is understood this guidance is to be revised, which may materially change the requirements for enhancement. There is 333.46 ha of peatland considered as of 'possible national interest' on the site (see EIA Report Chapter 8). Based on current guidance, up to 33 ha of degraded peatland would be required to be restored to deliver enhancement (within those Peatland Restoration Search Areas). This would be deliverable given the combined extent of the Peatland Restoration Search Areas totals up to 270.59 ha (even with the requirements for mitigation as discussed in EIA Report Chapter 8). Note, the amount of 33 ha of peatland required to be restored to achieve appropriate enhancement included in this ONEMP is indicative and the specific amount of peatland to be restored would accord with the applicable NatureScot guidance at the time of any consent.

#### Objective 2: Maintenance of Deer Population at a Sustainable Level for the Benefit of Peatland

- 3.4.5 The site is grazed, by deer and livestock. It is proposed that access for deer would continue throughout the operational lifetime of the Proposed Development and as such, habitat management principles to be further detailed and implemented would comprise a sensitive grazing regime. The objective would be to continually manage grazing densities within the site, to prevent overgrazing and encourage and maintain a good overall site condition. Any requirement for fencing to be created around particularly sensitive areas would be considered and would be guided by habitat monitoring. Should fencing be required/considered appropriate, it would be marked with droppers to reduce collision risk for black grouse.
- 3.4.6 No figures of deer control/culling counts for the site are available but it is understood that there is some active deer management, and this would likely continue at its current level. The Proposed Development would provide improved access for deer culling (through creation and/or upgrading of access tracks) and as such, more efficient deer control measures could be implemented, with densities <3-5 deer per km (a sustainable density for blanket bog and heathland habitats; Putman *et al.*, 2011; Scottish Natural Heritage, SNH, 2014), likely to be realised.
- 3.4.7 Monitoring of the peatland habitats on-site would be a fundamental aspect of the restoration works and success of these measures and therefore specific monitoring to determine grazing levels and pressures will be incorporated into the habitat monitoring programme. This will include appraising whether grazing levels are appropriate or whether there needs to be any alteration in the deer management on-site (which would be agreed with the landowner). The specifics into the monitoring protocol would be agreed with NatureScot and THC, if the Proposed Development is consented.

#### **Objective 3: Enhance Breeding and Foraging Habitat for Ground-nesting Birds**

3.4.8 Improving peatland condition on-site will benefit ground-nesting birds, particularly wading species. Waders will benefit from areas of peatland being 're-wetted' as this will increase the foraging potential (invertebrate prey in the soil) and make the ground softer for wader's bills to probe. There are likely to be areas which are on slightly higher ground/mounds such as tussocks which will remain dry for nesting, and accordingly there will be benefits to both breeding and foraging birds, which will both be important for breeding success.

## 3.5 Aim 2: Enhancement of Riparian Habitats

- 3.5.1 Baseline surveys identified several watercourses within the site as being suitable for supporting small numbers of migratory and non-migratory fish fauna. This included Allt Cnoc nan Cleireach and its tributaries in the north-west of the site, Allt Abhegaith in the north of the site, Allt na Goibhle in the south-west of the site, and Allt Fionnaidh in the south-east of the site.
- 3.5.2 All watercourses within the site drain into the Black Water River, which is part of the River Conon catchment. The Black Water River is classified as having overall good ecological status and high access for fish migration (see EIA Report **Technical Appendix 8.4: Fisheries**).
- 3.5.3 Prescriptive measures for inclusion within this ONEMP will be agreed with NatureScot, THC and Cromarty Firth Fishery Board.

#### **Objective 1: Management of Fish Cover**

- 3.5.4 Opportunities to increase habitat diversity for fisheries within the identified watercourses on the site would be investigated, with prescriptive measures agreed with NatureScot, THC and Cromarty Firth Fishery Board. The watercourses to be targeted would be the same as those targeted for riparian tree planting (see below).
- 3.5.5 Measures for improving and/or creating fish cover to be explored would comprise techniques such as placing boulders and wood debris in watercourse channels; these provide refugia for both juvenile and adult fish, and opportunities (such as shelter) for macroinvertebrates. A greater extent of exposed rocks and boulders would also provide a greater number of potential spraint sites for otter (*Lutra lutra*), as well as feeding perches for bird species like wagtails (*Motacilla* species) and dipper (*Cinclus cinclus*). However, only suitable water stretches would be considered, to ensure, for example, there is no risk of causing localised flooding.

#### **Objective 2: Management of Bank-side Vegetation**

- 3.5.6 Native riparian tree planting accords with Policy 3 of NPF4 through the strengthening of nature networks and improving connectivity within the Site.
- 3.5.7 Native riparian tree planting can deliver benefits for fisheries, including the casting of some shade, maintenance of cool water temperatures, provision of cover and sources of food from in-falling litter and insects. The cooling of water temperature is particularly key given the increasingly warming climate, and the negative impact this is likely to have on aquatic wildlife.
- 3.5.8 Areas for riparian tree planting would remain sensitive to the potential for exacerbating potential impacts upon such species groups resulting from the Proposed Development (e.g. tree planting on sensitive bog habitat/deeper peat). Areas of planted trees would be protected from grazing pressure likely through the construction of marked fencing.
- 3.5.9 Areas for appraising for riparian tree planting proposed is shown as 'Riparian Woodland Planting Search Areas' in **Figure 8.12** and would be along the Allt Cnoc nan Cleireach, Allt Abhegaith, Allt na Goibhle, and Allt Fionnaidh. The lengths of the Riparian Woodland Planting Search Areas are a combined *c.* 3.91 km, comprising the following indicative water stretches:
  - Allt Cnoc nan Cleireach 681 m;
  - Allt Abhegaith 531 m;
  - Allt na Goibhle 1.25 km; and
  - Allt Fionnaidh 1.44 km.

- 3.5.10 The watercourses listed above are the watercourse stretches that appear to be devoid of tree cover, principally based on a review of aerial imagery, but also results of the fish habitat surveys (see EIA Report **Technical Appendix 8.4**). It is considered unlikely that all 3.91 km stretches would be planted, and the specific areas would be agreed through consultation (see below) at the detailed design stage.
- 3.5.11 The identified watercourse stretches are located close to those watercourse stretches identified by Scottish Forestry as areas for riparian tree planting and are thus considered appropriate areas. These watercourses are also an appropriate distance from proposed turbines to ensure the mortality risk to bats from collisions is not increased.
- 3.5.12 The prescriptive measures would be agreed with NatureScot, THC, and Cromarty Firth Fishery Board.

#### **Objective 3: Enhance Habitats for Birds**

- 3.5.13 Black grouse are present at the locality and on-site (based on field surveys, see EIA Report **Technical Appendix 9.1: Ornithology**). Tree planting (including riparian planting) has potential to benefit black grouse. The survey results revealed a black grouse lek on-site in relatively close proximity of where some of the riparian tree planting is proposed (although sufficiently distant to not negatively impact the open nature of the lek site). Riparian planting to be prescribed would include both continuous and discontinuous shrub and tree dominated planting. Discontinuous areas of planting would ensure that extensive shading of existing food plants (e.g. grasses, heathers and bilberry (*Vaccininum myrtillus*), where present) for black grouse does not occur, with tree and shrub species planted selected for their preference by black grouse such as (amongst others) birch (*Betula* spp.), juniper (*Juniperus communis*), willow (*Salix* species), and rowan (*Sorbus aucuparia*). Such plant species would provide additional food sources for black grouse in the spring and winter, together with suitable cover from predation for both adults and broods. The riparian planting would be >500 m from the proposed turbines so that effects on any black grouse encouraged by the planting would not be adversely affected by the operation of the Proposed Development.
- 3.5.14 The creation of linear habitat features like riparian treelines would provide opportunities for a variety of bird species. Scrub and tree species of local provenance (prioritising fruit-producing species and black grouse forage species; see above) which would provide nesting and foraging resources for many bird species would be chosen.

#### **Objective 4: Improve Movement Routes for Bats**

3.5.15 Bats would benefit from the creation of treelines along riparian corridors and this would improve foraging and commuting opportunities for bats through the site (noting that no planting would be undertaken within an appropriate 'bat buffer' (minimum 105 m) from proposed turbines to minimise collision risks to bats). Tree planting would also benefit a host of other wildlife and would improve habitat connectivity and habitat networks in and through the site.

### 3.6 Aim 3: Improve Opportunities for Nesting Birds and Roosting Bats

#### Objective 1: Deploy Wildlife Boxes to Increase Opportunities for Nesting and/or Roosting Species

- 3.6.1 Measures for improving and/or creating opportunities for other nesting birds would comprise the installation of nest boxes, suitable for a range of species.
- 3.6.2 It is proposed that cavity-nesting boxes and open-nesting boxes would be installed within the site. Opportunities for roosting bats would also be increased on-site through the installation of bat boxes fixed to appropriate trees (these would be offset from operational turbines).
- 3.6.3 Given the site is largely open, upland moorland, the target area for the location of bird and bat boxes would be the north-west of the site, where there are large mature trees suitable for wildlife boxes to be fixed onto (as shown in **Figure 8.12**).

3.6.4 A bird nest box and bat roost box plan within the site would be designed by a suitably competent and qualified ecologist for incorporation into the NEMP, with the final number, type and location of boxes confirmed in consultation with NatureScot, to be most relevant to the species assemblage present, and any local priorities.

### 3.7 Aim 4: Improve Habitats On-site for Invertebrates

3.7.1 Liaison with Buglife identified a number of invertebrate species to be considered for benefiting from habitat enhancements. This included four rare pollinator species, particularly given the site is located close to a 'B-line' which represents an 'insect pathway'<sup>3</sup>. The four species Buglife specifically mentioned with this regard were: aspen hoverfly (*Hammerschmidtia ferruginea*), Rannoch brindled beauty (*Lycia lapponaria*), pinewood mason bee (*Osmia uncinata*) and pearl-bordered fritillary (*Boloria euphrosyne*). Note, aspen hoverfly, pinewood mason bee and pearl-bordered fritillary are also all Local Biodiversity Action Plan species for THC.

#### Objective 1: Improve Peatland Habitat for Target Invertebrates

3.7.2 The Rannoch brindled beauty was identified by Buglife as a potential target species for benefiting from habitat enhancement. This moth species requires damp moorland, with the caterpillar food plants, bog myrtle (*Myrica gale*) and heather. The restoration measures for the degraded peatland on-site as detailed in Aim 1 (which would include restoration of wet heath/M15 habitat), is likely to benefit the species. This is particularly the case given ditch-blocking aiming to increase the water-table in those identified areas would result in the habitat holding more water. As a result, the extent of standing water associated with the peatland would likely be increased which would also benefit other invertebrates, including dragonflies and damselflies.

#### Objective 2: Increase Tree and Scrub Coverage for Target Invertebrates

- 3.7.3 The aspen hoverfly was identified by Buglife as a key target species for benefitting from habitat enhancement. This species requires aspen (*Populus tremula*), with the larvae living in the bark of rotting, fallen aspen branches. Buglife also suggested targeting habitat enhancement for the white-faced darter (*Leucorrhinia dubia*), which requires (along with deep bog pools), scrub or woodland for roosting and feeding. Two ground beetles (*Thalassophilus longicornis* and *Bembidion virens*), would also benefit from increased amount of deadwood.
- 3.7.4 The tree and scrub planting (see Aim 5) would provide benefits to invertebrates (including those listed above), with benefits most notable in the future as the woodland areas/treelines establish. Aspen would be part of the species composition to be planted. It is acknowledged that it would take many years for the woodland/treelines to provide deadwood, but in the interim period, materials from any areas of trees/woodland to be cleared for the Proposed Development (*c*. 1.2 ha) would be scattered (including into log piles) particularly targeting the edge of the forestry/woodland on the periphery of the site, so in close proximity to sheltered habitats. Increased deadwood on-site would be expected to benefit a number of invertebrates.

#### Objective 3: Increase Wildflower Diversity for Target Invertebrates

3.7.5 The pinewood mason bee and pearl-bordered fritillary were identified by Buglife as two other species to target for habitat enhancement. The species respectively require bird's foot trefoil (*Lotus corniculatus*) and violets (*Viola* species), with the latter requiring violets as a food plant at the caterpillar stage. Trefoil and violets typically require well-drained soils. Trefoil was recorded within grassland at the off-site turning circle area, and violets were recorded in some of the better drained parts of the site (see EIA Report **Technical Appendix 8.1**). It is proposed that the areas of improved grassland identified at the

<sup>&</sup>lt;sup>3</sup> <u>https://www.buglife.org.uk/our-work/b-lines/</u> (Accessed 27/02/2025).

Off-site turning circle area (out with the Off-site turning circle development footprint) would be seeded with an appropriate native wildflower mix including trefoil and violets to provide foraging opportunities for bees and butterflies, including the pinewood mason bee and pearl-bordered fritillary.

#### Objective 4: Improvement to Conditions of Watercourses for Target Invertebrates

3.7.6 Riparian tree planting can help improve conditions of watercourses for caddisflies and other aquatic invertebrates, by providing better dispersal corridors (see Arce *et al.*, 2023). Buglife identified the caddisfly (*Limnephilus subcentralis*) as being a potential target species for habitat enhancement, and riparian planting (see Aims 2 and 5) would accordingly improve conditions on-site for caddisflies. The creation of more cover in the identified watercourses (see Aim 2) would also benefit invertebrates like caddisflies during their larval stage through providing shelter and helping to slow waterflows. Fully aquatic invertebrates would also benefit from such watercourse enhancement measures.

### 3.8 Aim 5: Enhance and Increase Native Tree Cover

#### Objective 1: Improve Structure and Increase Extent of Woodland Habitats On-site

- 3.8.1 Riparian tree planting (c. 3.91 ha) would be implemented, with details as in Aim 2. This would have multifaceted benefits for biodiversity as outlined in this ONEMP. As well as providing shelter, feeding and roosting opportunities for wildlife (including black grouse), riparian planting would increase habitat connectivity through parts of the site (whilst being sensitive to the locations of proposed turbines). Increasing the extent of the riparian planting is a target for Scottish Forestry<sup>1</sup> and riparian planting is also considered a biodiversity gain at a greater than site-level geographic scale.
- 3.8.2 The native broad-leaved planting (1.61 ha) in the west of the site would help 'soften' the edge of the commercial forestry which is located along the western site boundary. As well as improved opportunities (for example foraging, roosting and nesting) for wildlife, increasing the extent of woodland on-site would accord with NPF4 Policy 6 (see **Section 3.2**). The precise locations of the native planting would be the focus of on-site investigation to ensure the most suitable localities are chosen without compromising other key features, such as areas of deeper peat and ground-nesting wader habitat (as well as avoiding potentially increased 'edge-effects').

# **4** STEERING GROUP AND REVIEW COMMITTEE (SGRC)

- 4.1.1 A SGRC would be established to oversee the effectiveness of the NEMP .
- 4.1.2 For the first five years of implementation, the SGRC would meet or correspond at least annually.
- 4.1.3 The following bodies would be invited to form part of the SGRC:
  - the Operator of the Proposed Development;
  - the Landowners (or their representatives);
  - independent ecologist appointed by the Operator;
  - THC;
  - NatureScot;
  - Scottish Environment Protection Agency (SEPA); and
  - Cromarty Firth Fishery Board.

# 5 MONITORING

- 5.1.1 Monitoring is proposed as part of the NEMP in operational years 3, 5, 10 and 15 (and the requirement for additional monitoring after year 15 determined by monitoring results in year 15) of the Proposed Development and would consist of checks of the habitat enhancement measures detailed in the NEMP. The Applicant would provide a summary of the NEMP activities and monitoring results to the SGRC each year of monitoring. The frequency of monitoring and reporting thereafter would be agreed with the SGRC.
- 5.1.2 A monitoring programme to include compliance checking of the implementation of prescriptive measures along with the monitoring of the effectiveness of such measures would be established and agreed in consultation with NatureScot and THC. This would allow the success of measures outlined in the NEMP to be determined, and any requirement for remedial measures to be adopted. This would likely include measures to monitor the condition of peatland comprising botanical survey and dipwells<sup>4</sup>, and monitoring of tree planting to ensure any failed stock can be identified and readily replaced. This would also include identifying evidence of deer grazing and whether deer management as undertaken on the site is appropriate for enhancing biodiversity, or whether changes to the deer control are required (for example, increased culling). Any alterations required to deer management would be discussed with the landowner.
- 5.1.3 It is proposed that ornithological monitoring would be undertaken as part of the monitoring programme, including breeding bird surveys. The focus of the survey would be within 500 m of the Proposed Development. The frequency and scope of surveys (including any requirement for carcass searches) would be agreed with NatureScot, and the results of the survey would be shared with NatureScot and THC.
- 5.1.4 The requirement for any updated baseline surveys to act as 'Year 0' for monitoring purposes would also be identified and undertaken at the appropriate time (such as, within the first year of operation of the Proposed Development and during the main growing/breeding season March to August, inclusive).
- 5.1.5 The NEMP would be intended to remain a live document which would be updated and amended as necessary, based on results of the site investigation works and monitoring. The SGRC would be kept informed of any proposed changes to the NEMP and their agreement sought as necessary, given the SGRC would oversee the effectiveness of the NEMP.

<sup>&</sup>lt;sup>4</sup> Common and easiest method to measure water levels/depth of a water table, to help monitor the success of rewetting enhancement measures.

# 6 **REFERENCES**

Arce, A. P., Palt, M., Schletterer, M. and Kail, J. (2023). Has riparian woody vegetation a positive effecton dispersal and distribution of mayfly, stonefly and caddisfly species? Science of the Total Environment879,25June2023,163137.Availablehttps://www.sciencedirect.com/science/article/abs/pii/S0048969723017564?via%3Dihub27/02/2025).

Ball, L., Still, R., Riggs, A., Skilbeck, A., Shardlow, M., Whitehouse, A. and Tinsley-Marshall, P. (2022). *The Bugs Matter Citizen Science Survey: counting insect 'splats' on vehicle number plates reveals a 58.5% reduction in the abundance of actively flying insects in the UK between 2004 and 2021.* Technical Report. Buglife and Kent Wildlife Trust. Available at: <u>https://cdn.buglife.org.uk/2022/05/Bugs-Matter-2021-National-Report.pdf</u>. (Accessed 26/02/2025).

NatureScot (2023). Advising on peatland, carbon-rich soils and priority peatland habitats in development management. November 2023. Available at: <u>https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management</u> (Accessed 26/02/2025).

Putman, R., Landbein, J., Green, P. & Watson, P. (2011). Identifying threshold densities for wild deer in the UK above which negative impacts may occur. *Mammal Review*, 41 (3), pp 175-196.

SNH (2014). Planning for development: What to consider and include in a deer assessments and management at development sites. Scottish Natural Heritage, Inverness.



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