

Breezy Hill Energy Project

Outline Biodiversity Enhancement Management Plan

Technical Appendix 6.6

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1 INTRODUCTION

The following document presents an Outline Biodiversity Enhancement Management Plan (OBEMP), which has been prepared to accompany the proposed Breezy Hill Energy Project (hereafter referred to as the ‘Proposed Development’) Environmental Impact Assessment Report (EIAR).

It sets out habitat and conservation management measures that are proposed as part of the Proposed Development and which will achieve significant biodiversity enhancement in accordance with the principals of National Planning Framework 4 (NPF4) Policy 3: Biodiversity (Scottish Government, 2023), through restoring degraded habitats and creating and strengthening nature networks.

Following receipt of planning consent for the Proposed Development, the aims, objectives and prescriptions of management measures outlined herein will be finalised in consultation with NatureScot, relevant landowners and the advisory of an appointed Biodiversity Advisory Committee (BAC) and submitted for approval by East Ayrshire Council (EAC), by way of a suitably worded planning condition.

The finalisation of management measures and the areas over which those measures will take place, would be undertaken prior to the commissioning of the Proposed Development and will be informed through further site-investigations and input from technical specialists as required.

Once finalised, management measures, together with requirements for monitoring and reporting, will be set out and implemented as the Biodiversity Enhancement Management Plan (BEMP) for the Proposed Development, which will remain in place as agreed for the Proposed Development's operational lifetime (anticipated to be 40 years), unless otherwise agreed with EAC, NatureScot and the advisory of the BAC.

The BEMP will be subject to an agreed review process, to ensure that local biodiversity is enhanced over the lifetime of the Proposed Development to a demonstrably better state than without intervention. A Biodiversity Advisory Committee (BAC) would oversee and monitor the implementation of the agreed BEMP. The BAC should include representatives from EAC, NatureScot, and the Applicant (and/or any subsequent operator of the Proposed Development).

The implementation and funding of the agreed BEMP will be the responsibility of the Applicant, or any subsequent operator of the Proposed Development.

This OBEMP is set out in the following sections and should be read with reference to **Figure 6.18 (EIAR, Volume 2a)**:

- Existing Conditions & Summary of the Ecological Impact Assessment (EcIA);
- Biodiversity Net Gain (BNG);
- Biodiversity Enhancement Area (BEA);
- Aims, Objectives and Management Prescriptions;
- BNG Assessment;

- Monitoring;
- Reporting and BEMP Review; and
- Management and Monitoring Timescales (**Annex A**).

2 EXISTING CONDITIONS & SUMMARY OF ECOLOGICAL IMPACT ASSESSMENT

The Proposed Development is set within predominantly commercial conifer plantation forestry and clearfell, with pockets of other habitats including blanket bog/wet modified bog, marshy and semi-improved grassland.

As per **Chapter 6 (EIAR, Volume 3)**, important ecological features (IEFs) scoped-in to the ecological impact assessment comprise blanket bog/wet modified bog, and commuting/foraging bats (high-risk collision species); no significant effects are predicted.

The direct habitat loss for blanket bog is predicted to be 0.11 ha due to permanent infrastructure, with up to an additional 0.05 ha due to temporary works areas. This results in a potential total direct loss of 0.16 ha of the blanket bog within the Site. If indirect drainage effects are fully realised out to 10 m in all blanket bog areas, then predicted losses increase to 0.34 ha for permanent infrastructure. This worst-case scenario of direct and indirect habitat loss for permanent and temporary works areas is a total of 0.49 ha (see **Chapter 6 (EIAR, Volume 3)**).

The direct habitat loss for wet modified bog is predicted to be 0.51 ha due to permanent infrastructure, with up to an additional 0.46 ha due to temporary works areas. This results in a potential total direct loss of 0.97 ha of the wet modified bog within the Site. If indirect drainage effects are fully realised out to 10 m in all wet modified bog areas, then predicted losses increase to 1.14 ha for permanent infrastructure. This worst-case scenario of direct and indirect habitat loss for permanent and temporary works areas is a total of 2.10 ha modified bog (see **Chapter 6 (EIAR, Volume 3)**).

It should be noted that as part of the assessment, the focus is on the Important Ecological Features (IEF). The loss of forestry is considered in **Chapter 6 (EIAR, Volume 1)** and as part of the calculations, but not discussed at length as it is not an IEF.

This OBEMP proposes measures that provide appropriate compensation and enhancement in cognisance of NatureScot guidance (NatureScot, 2023) with respect to the predicted effects on blanket bog/wet modified bog habitats, as well as other proposals to provide wider biodiversity enhancement in general.

Potential collision risk impacts to bats will be mitigated in accordance with the proposals detailed in **Chapter 6 (EIAR, Volume 3)** however, several measures in this OBEMP will also create and enhance habitats and corridors for bats commuting and foraging, and in the long-term potentially provide roost features.

The local bird assemblage is described in **Chapter 7 (EIAR, Volume 3)**. No significant effects are predicted, but measures contained within this OBEMP will have secondary benefits for the local bird assemblage, including black grouse, through increasing available habitat and its suitability for nesting and foraging.

3 BIODIVERSITY NET GAIN

BNG is a process which follows the principal of biodiversity enhancement and leaves nature in a better condition than before development work started. No Scotland-specific biodiversity metric is yet in existence, although one is proposed for development by the Scottish Government and NatureScot. However, as per below, the Scottish & Southern Energy Renewables (SSER) BNG Metric has been used here as an interim measure as it is considered the most appropriate available metric in the Scottish context.

The SSER BNG toolkit (SSE, 2023) for use in Scotland is based upon a version of the Natural England Biodiversity Metric (Natural England, 2022) which aims to quantify biodiversity based upon the value of habitats for nature. It is a method for demonstrating whether development projects have been able to maintain or increase the biodiversity value of a development site after construction works. The SSER BNG toolkit has been utilised to undertake a preliminary BNG assessment for the Proposed Development and the measures proposed within this OBEMP.

The scope of the BNG assessment is to quantify the overall potential adverse and beneficial biodiversity impacts associated with the Proposed Development; this includes a biodiversity baseline assessment, analysis of habitat losses due to temporary works and permanent structures (e.g., tracks and hardstandings), and analysis of biodiversity gains following reinstatement of habitats in areas of temporary construction work and additional habitat enhancement and creation (whether onsite and/or offsite). **Specific areas for habitat creation and enhancement are still being discussed during the preparation of this OBEMP but will be detailed in full in the final BEMP.**

It is important to note that within the SSER and other BNG metrics, habitats which are negatively impacted and considered as ‘irreplaceable’ will require bespoke compensation and should be compensated for, following national legislation, policy, and guidelines (SSE, 2023). However, as per SSER guidance (SSE, 2023), irreplaceable habitats and compensation for them should be included within the biodiversity unit calculations and included within the respective biodiversity toolkit. Inclusion of these areas within the BNG calculations and toolkit is required to provide a complete picture of all habitats present on-site. In line with SSER guidance (SSE, 2023) for the Proposed Development, irreplaceable habitats comprise areas of active blanket bog in good condition. Compensation and enhancement relating to blanket bog habitats on-site is considered in cognisance of NatureScot guidance (NatureScot, 2023).

The BNG assessment is based upon National Vegetation Classification (NVC) and habitat surveys (converted to Phase 1 habitat types for the purposes of the BNG toolkit) undertaken to inform the EIAR (**Technical Appendix 6.1; EIAR, Volume 3, and Figure 6.3; EIAR, Volume 2a**). The results of the BNG assessment will aid in the development of the final BEMP during the application determination process and help inform the area of land required to fulfil BNG compensation and enhancement requirements, ultimately ensuring significant biodiversity enhancements are provided in line with NPF4.

4 BIODIVERSITY ENHANCEMENT AREA (BEA)

This OBEMP proposes a BEA, which comprises several overarching Habitat Management Areas; see **Figure 6.18 (EIAR, Volume 2a)**, each focussing on a particular habitat or feature type, within which management and monitoring works would be implemented.

At the time of writing, the areas available for enhancement (and the type of enhancement proposed for those areas) were in the process of being discussed and agreed with Forestry and Land Scotland (FLS) (the landowner), Breezy Hill Energy Project (the Applicant), the developer of neighbouring North Kyle Energy Project, and East Ayrshire Council. Through extensive discussions with the landowner (paying particular cognisance to the emerging Land Management Plan for the Site (FLS, 2025), assessment of the Final Habitat Management Plan (FHMP) for neighbouring North Kyle Energy Project (MacArthur Green, 2022), and consultation with East Ayrshire Council regarding their landscaping work completed at North Kyle Energy Project, the Applicant is committed to work alongside to complement the aforementioned plans to provide biodiversity enhancement on a landscape scale, providing significant biodiversity enhancements to the local area.

Based on the nature of existing habitats within the Site and discussions with the landowner and consideration of adjacent enhancement plans (as previously discussed), the following methods of enhancement are being discussed and may be implemented:

- forest to bog restoration;
- native woodland creation;
- scrub planting; and
- heath-acid grassland mosaic creation.

The overall aim of the OBEMP is to restore, enhance, create and conserve habitats of ecological value in these Habitat Management Areas (HMA), which in turn will benefit existing flora and fauna as well as increase biodiversity in general.

The precise objectives and management prescriptions for the finalised BEA will depend on final areas agreed with the landowner, the current state of the habitats within those areas and the factors acting upon them. In order to inform the objectives and detail appropriate management prescriptions, further specific surveys may be required to be undertaken in developing the final BEMP. These surveys may include, but are not limited to, relevant peatland condition assessments in line with Peatland Action guidance (NatureScot, 2023); monitoring of habitats in accordance with JNCC Common Standards Monitoring of Upland Habitats (JNCC, 2009) or habitat condition assessments utilising the latest Biodiversity Metric condition assessment pro-forma and methodology; hydrology walkover to identify opportunities for drain blocking and restoration of the peatland water table; a Herbivore Impact Assessment (HIA) and pre-commencement ornithological surveys.

5 AIMS, OBJECTIVES AND MANAGEMENT PRESCRIPTIONS

The aims define the general BEMP goals, supported by clear objectives, management prescriptions and a management and review process, to enable significant biodiversity enhancements to be delivered over the lifetime of the Proposed Development.

The proposed areas for habitat management and the development of the BEMP are being determined through ongoing discussions with relevant landowners. Detailed appropriate objectives and prescriptions will be developed when Search Areas have been agreed and subject to further survey, with these survey results refining the BEMP in consultation with statutory consultees where necessary. However, the experience gained from providing and delivering plans for similar sites and habitats would suggest that as an outline, the aims, objectives and prescriptions would likely include or be similar to the below sections.

- Aim 1: Forest to Bog Restoration
- Aim 2: Native Woodland Creation
- Aim 3: Scrub Planting
- Aim 4: Heath-Acid Grassland Mosaic Creation

Annex A provides an indicative timetable for the implementation of the proposed management prescriptions.

5.1 Aim 1: Forest to Bog Restoration (Areas 2 and 6; Figure 6.18, EIAR, Volume 2a)

The aim will be to return existing commercial forestry to bog / peatland habitats and create favourable conditions for the re-establishment of peatland vegetation.

Objective 1.1	Increase the abundance and distribution of major peat forming species, particularly <i>Eriophorum</i> spp. and <i>Sphagna</i> (especially broad-branched species such as <i>S. papillosum</i>).
Objective 1.2	Increase the abundance of dwarf shrubs such as <i>Calluna vulgaris</i> and <i>Erica tetralix</i> in line with local reference blanket bog.
Objective 1.3	Limit regenerating conifers, and no conifers more than 0.5 m in height after 5 years.
Prescription 1.1	The specific areas appropriate for each treatment would be confirmed with FLS and a specialist site contractor in advance of restoration works. Remove the stump/ridge furrow legacy of the conifer plantation in line with emerging best practice methods for peatland restoration (e.g. see Short and Robson, 2016).
Prescription 1.2	Dam active drains and gullies in order that the water level is raised sufficiently to create conditions suitable for species mentioned within Objective 1.1.
Prescription 1.3	Manage deer grazing numbers within the HMA if required to achieve Objective 1.2.
Prescription 1.4	Remove conifers to promote recovery of the bog and wet heath habitat (Objective 1.1).

A number of methods are available to achieve forest to bog restoration and these are detailed within the NatureScot Peatland Compendium (NatureScot, 2025) and Forestry and Land Scotland's Peatland Restoration Operational Specifications (FLS, 2025a). NatureScot's Peatland Compendium advises that, 'The type of restoration technique required will depend on site topography, peat type, hydrology, peat depth, peat slide risk, as well as the tree species present, their age, Yield class, rooting depth, alongside the ability to extract timber and harvesting technique used/considered, and the presence or absence of peat forming vegetation'.

- Prescription 1.5 The following activities will be prohibited within the HMA:
- clearing out of existing ditches;
 - application of any insecticides, fungicides or molluscicides;
 - application of lime or any other substance to alter the soil acidity;
 - cutting or topping of vegetation except to control injurious weed species;
 - burning of vegetation or other materials;
 - use of roll or chain-harrow;
 - planting trees;
 - carrying out any earth moving activities;
 - use for off-road vehicle activities;
 - construction of tracks, roads, yards, hardstandings or any new structures (not associated with the proposed development); and
 - storage of materials or machinery.

5.2 **Aim 2: Native Woodland Creation (Areas 1, 3 and 5; Figure 6.18, EIAR, Volume 2a)**

The aim will be to plant areas of diverse semi-natural broadleaved woodland which is to be retained long-term. The woodland and planting will largely aim to reflect the naturally occurring canopy composition depending on the character and respective soil conditions throughout the Unit; however, depending on the respective soil conditions present, other target NVC types may also be considered.

The replacement of conifer plantation with native broadleaved woodland has beneficial biodiversity effects, through increasing species diversity, allowing light to penetrate the field layer and providing more natural and diverse breeding, shelter and foraging habitats for a range of species (from terrestrial invertebrates to birds and various mammal species). The proposals here will link to native broadleaf woodland that FLS have planned to plant. The planting proposals may also benefit black grouse which are present on the Site and locally through enhanced shelter and increased foraging resources.

- Objective 2.1 Create areas of native broadleaved woodland and increase diversity at agreed locations around the Site, seeking to achieve Moderate condition broadleaved woodland in 15 years after planting.
- Objective 2.2 Increase and enhance faunal diversity within and around the site by providing more habitat structure and new breeding, reduce predation risks

- for ground-nesting birds, provide new shelter and foraging habitats for a range of birds, bats and other small mammals, and invertebrates.
- Prescription 2.1 Plant with a diverse mix of native broadleaved species to extend the existing broadleaf woodland habitat.
- Given the location, soils and prevailing baseline habitats of the proposed planting areas, and to reflect the character and structure of the existing broadleaved woodlands locally, it is anticipated that the species mixes here would primarily contain oak (*Quercus* spp.), birch (*Betula* spp.) and rowan (*Sorbus aucuparia*). However, it is proposed to increase diversity by also including smaller proportions of species such as aspen (*Populus tremula*), goat willow (*Salix caprea*), hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*), bird and/or wild cherry (*Prunus* spp.), crab apple (*Malus sylvestris*), small-leaved lime (*Tilia cordata*), wych elm (*Ulmus glabra*) and holly (*Ilex aquifolium*). Where there are damper soils the species mix may also include alder (*Alnus glutinosa*) and grey willow (*Salix cinerea*).
- Proportions of species and their planting locations would be determined by a forester, in agreement with a suitably qualified ecologist, during preparation of the final BEMP.
- Tree planting would be carried out between the months of November and March when trees are dormant and more likely to establish successfully. Days when the ground is frozen or when snow or excessive surface water is present are to be avoided.
- Prescription 2.2 New fencing of some planting areas may be required to protect new trees from deer and livestock browsing during the establishment phase. This will be avoided in so far as is possible, with any new fencing would follow guidelines in Trout & Kortland (2012) to minimise collision risks for black grouse.
- Trees will be planted in 1 m - 1.2 m tree tubes to further protect from browsing damage in areas that remain unfenced, or where deer or livestock may breach fenced areas.
- Tree tubes (and fencing where applicable) will be removed after approximately 10 years or after adequate establishment of the trees.
- Prescription 2.3 Manage deer densities, if required, to allow woodland establishment. Subsequently use the results of vegetation and tree monitoring to determine whether ongoing deer management and culling requires to be reviewed to allow successful establishment of the trees planted.
- Prescription 2.4 Prohibited activities noted in Prescription 1.3 above apply (with the exception of planting native broad-leaved trees).

5.3 Aim 3: Scrub Planting (Area 4; Figure 6.18, EIAR, Volume 2a)

The creation of scrub habitat has multiple beneficial biodiversity effects such as creating structure and new breeding, shelter and foraging habitats for a range of species, from terrestrial invertebrates to birds and bats.

Dependent on soil conditions and hydrology, the mixture of scrub species will include bramble, gorse, whin and potential some small growing trees such as rowan, hazel and hawthorn. This

composition will again serve to benefit black grouse populations, improving habitat connectivity locally for the species.

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| Objective 3.1 | Create scrub and grassland to complement the proposed broadleaf planting to screen the substation. As well as an aesthetic benefit, the habitats will bring benefits such as greatly increasing local floral diversity. Aim is to achieve a condition category of Good in 15 years. |
| Objective 3.2 | Increase faunal diversity locally by providing more flower-rich habitat that benefits populations of insects, birds, bats, and many other species. |
| Prescription 3.1 | This will initially involve ground preparation, creating a stale seedbed, and sowing with appropriate native wildflower seed at the correct time of year. The wildflower seed mix will be confirmed within the final BEMP. |
| Prescription 3.2 | Annual grassland management to maintain the habitat in line with best practice and guidance. This will be via cutting.

Alternatively, the grassland will be managed via cutting in late summer, no earlier than 31st July. Grass cuttings would be baled and removed. Around 5 %-10 % of the field may remain uncut each year, a different area each time, to vary the sward height and allow seed to set seed. Grazing after cutting (aftermath grazing) will also create variety, if applicable. |
| Prescription 3.3 | No supplementary chemical fertilisers, organic manures or slurry to be applied to the field for the lifetime of the BEMP. |
| Prescription 3.4 | Weed species such as docks, ragwort and creeping thistle will be controlled where they impact negatively on the overall area of species-rich grassland. Weeds can be chemically spot treated. |
| Prescription 3.5 | Prohibited activities noted in Prescription 1.3 above apply. |

5.4 Aim 4: Heath-acid grassland mosaic creation (Area 7; Figure 6.18, EIAR, Volume 2a)

The creation of heath-acid grassland mosaic habitat restores natural habitats that have been lost or degraded due to human activities such as mining and forestry. This habitat has multiple benefits to biodiversity such as creating structure and new breeding, sheltering and foraging habitats for a range of species, from terrestrial invertebrates to birds and bats. Additionally, planting the bare and exposed acidic soils with a heath-acid grassland mosaic will stabilise the soils.

The soils will initially be nutrient-rich but over time, these nutrients may deteriorate, forming patches of acid grassland within the management units. This will result in the creation of a heather dominated acidic grassland with species such as common heather (*Calluna vulgaris*), bell heather (*Erica cinerea*), cross-leaved heath (*Erica tetralix*), and acid grassland species like sheeps fescue (*Festuca ovina*) and wavy hair-grass (*Deschampsia flexuosa*).

This composition will again serve to benefit black grouse populations, improving habitat connectivity locally for the species.

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| Objective 4.1 | Create mosaic of heath and acid grassland to reflect historical and natural conditions. Aim is to achieve a condition category of Good in 5 years. |
| Objective 4.2 | Increase faunal diversity locally by providing more flower-rich habitat that benefits populations of insects, birds, bats, and many other species. |

Objective 4.3	Prevent the natural spread of dominant <i>Juncus</i> spp. if left unmanaged as that would not enhance the floral or faunal diversity.
Prescription 4.1	This will initially involve ground preparation, ensuring the 300mm exposed peat capping is evenly distributed and properly compacted, with underlying clay soils to support habitat creation. The seed mix will be confirmed within the final BEMP.
Prescription 4.2	Use a mix of direct seeding and plug planting to establish vegetation during the autumn or early spring to take advantage of natural rainfall. Retain some bare ground areas to support pioneer species and enhance habitat diversity.
Prescription 4.3	No supplementary chemical fertilisers, organic manures or slurry to be applied to the field for the lifetime of the BEMP.
Prescription 4.4	Weed species such as docks, ragwort and creeping thistle, and plants such as <i>Juncus</i> sp. will be controlled where they impact negatively on the overall area of species-rich grassland. Weeds can be chemically spot treated. Remove the natural regenerating conifers and willow species.
Prescription 4.5	Adjust deer grazing intensity seasonally to protect sensitive areas and promote plant diversity.
Prescription 4.6	Conduct annual surveys to monitor plant growth, species diversity, and habitat condition. Following these surveys, adjust the management practices based on monitoring results and emerging challenges.

6 BIODIVERSITY NET GAIN ASSESSMENT

6.1 Overview

The SSER biodiversity toolkit was used to quantify the biodiversity value of the Site based upon the habitats present and to demonstrate the project would achieve biodiversity enhancements in line with NPF4 Policy 3 requirements. This includes:

- Quantitative assessment to determine the biodiversity baseline prior to development based on the habitats data collected for the Proposed Development (**Technical Appendix 6.1; EIAR, Volume 3, and Figure 6.3; EIAR, Volume 2a**);
- Assessing the loss of habitat during construction; and
- Analysis of the biodiversity value following works, with retention and creation/restoration/enhancement of habitats on-site and off-site.

Habitat quality (distinctiveness, condition, strategic significance and connectivity) was determined for each Phase 1 habitat type by reviewing the habitat survey data and surveyor experience, and referring to the following guidance:

- SSER BNG Toolkit User Guide (SSE, 2023);
- Natural England Biodiversity Metric 4.0 (Natural England, 2022) – User Guide, Technical Supplements, and Habitat Condition Assessment; and

- JNCC Common Standards Monitoring (CSM) criteria (JNCC, 2009) (used to aid some habitat condition assessments).

In line with SSER guidance (SSE, 2023), the boundary for the baseline biodiversity assessment equates to the habitats within the Site boundary affected by the Proposed Development (i.e., areas of permanent and temporary land take), including any buffer effects, where appropriate (e.g., indirect drainage effects on relevant wetland habitats), along with any areas identified for biodiversity enhancements (i.e., the proposed OBEMP Units).

6.2 BNG Assessment Results

6.2.1 Biodiversity Baseline

The biodiversity baseline for the Proposed Development covers 33.13 ha (not including the area of proposed OBEMP/HMA units) and is based upon the habitat quality scores (distinctiveness, condition, strategic significance and connectivity), the area of the habitats directly and indirectly affected by the Proposed Development¹, and the resulting number of Biodiversity Units (BU) or Irreplaceable (IRR) habitat units each area and type of habitat contributes. Habitat types of less than 0.01 ha are under the minimum mappable unit (MMU) and were not included in line with SSER metric guidance, as they are not large enough to be considered a viable habitat and be effectively managed to increase overall biodiversity.

Using the SSER BNG toolkit, the biodiversity value of the baseline BNG assessment area was calculated to be 109.84BU, with zero IRR².

6.2.2 Biodiversity Change During Construction

During the construction of the Proposed Development, habitats will be lost, either temporarily or permanently, to provide construction compounds, access tracks, and the turbine/hardstandings infrastructure footprints. The majority of habitat, and biodiversity, under the infrastructure footprint areas is therefore lost during works. There may also be some indirect drainage effects on relevant wetland habitats, with a 10 m indirect drainage buffer assumed, as discussed further in **Chapter 6 (EIAR, Volume 3)**. The relevant habitats in this buffer are not lost and are retained, however in line with SSER BNG guidance for affected habitats, it is assumed that the indirect effects result in a drop in habitat condition category.

The BU that will be removed to accommodate the Proposed Development are summarised in Error! Reference source not found. in **Section 6.2.4** below. The assessment results, as shown in **Chapter 6, EIAR Volume 3 (Table 6.10)**, predict a 18.54 loss of habitat for permanent infrastructure. The SSER BNG Metric user guide states that in situations where habitats will be temporarily impacted by any works and will be fully restored to its baseline condition (or improved) within two years following completion of programme, it can be considered as retained habitat within the toolkit. Therefore, temporary working areas in habitats such as certain grasslands are considered to fall within this category. However, certain habitat types temporarily impacted at the Proposed Development will likely take more than two years to recover to their previous condition and therefore this cannot be

¹ The predicted and potential habitat losses and modifications associated with Proposed Development for each habitat type are detailed in **Chapter 6: Ecology, EIAR, Volume 3, Table 6.10**.

² No irreplaceable habitats (as detailed within SSER guidance) are predicted to be lost as a result of the Proposed Development.

considered a ‘temporary’ loss and must be recorded in the BNG calculation tool as having been permanently lost. Resultantly, a further 14.31 ha loss of habitat for temporary working areas in habitats such as acid grassland, marshy grassland, blanket bog, wet modified bog, and flush is predicted, and these have been considered a loss in the BNG toolkit. Potential indirect modifications to certain sensitive wetland habitats (blanket bog, wet modified bog and flush) cover a further 1.6 ha, with drop in habitat condition and associated BU assumed in the BNG toolkit.

At the end of the construction phase, any temporary working areas will be restored following best practice methods and guidance. It is assumed that in general and where feasible and practicable, reinstated habitats in the temporary works areas will be ‘like for like, or better’, compared to the baseline habitat and in line with guidance principles.

Overall, this equates to a total of 82.89 BU (a loss of 26.95 BU) at the end the construction phase.

6.2.3 Post Development Biodiversity Enhancement

Significant biodiversity enhancement in line with NPF4 requirements would be delivered through the enhancement/restoration and creation of habitat in the local area, as proposed by HMA 1-7 (Figure 6.18, EIAR, Volume 2a).

6.2.4 Summary of Overall Biodiversity Change

Table 6-1 summarises the change in BU from the baseline, and after construction/site reinstatement of temporary areas as discussed above.

Table 6-2 summarises the change in BU from the baseline after enhancement and creation of habitats following implementation of the HMAs discussed in this OBEMP; as can be seen in the table, it is feasible for significant biodiversity enhancements (over 10% increase in BU) to be achieved through implementation of one or a combination of the proposed HMA areas.

Table 6-1: Overall Biodiversity Change

Stage	Biodiversity Units (BU)	BU Gained/Lost from Baseline
Baseline (Before Works)	109.84	N/A
During Construction Works	13.89	-95.95 (-87.35 %)
Following Site Reinstatement of Temporary Working Areas	82.89	-26.95 (-25 %)

Table 6-2: Comparative BU Change after Implementation of Proposed HMAs

HMA (Figure 6.18)	Before Works (BU)	Post Development - Habitat Creation/Enhancement of HMA (BU)	Net Change (BU)	Proposed Enhancement
1	109.84	117.09	+7.25 (+7 %)	Native Woodland
2	125.24	114.85	-10.39 (-8 %)	Forest to Bog
3	109.84	87.48	-22.36 (-20 %)	Native Woodland
4	109.84	85.35	-24.48 (-22 %)	Scrub
5	109.84	106.71	-3.13 (-3 %)	Native Woodland

HMA (Figure 6.18)	Before Works (BU)	Post Development - Habitat Creation/Enhancement of HMA (BU)	Net Change (BU)	Proposed Enhancement
6	267.84	410.80	+142.96 (+53 %)	Forest to Bog
7	109.84	111.45	+1.61 (+1 %)	Heath/Acid- Grassland Mosaic
All	283.24	536.41	+253.17 (+89 %)	

It should be noted that HMA 2, 3, 4 and 5 return a negative value; these values have been included in the report to show the reader that all options have been given due consideration. Progressing to the BEMP, HMA 1, 6 and 7 will be considered.

6.2.5 Limitations to the BNG Assessment

BNG assessments are crucial for ensuring that new developments contribute positively to the environment. However, they come with several limitations:

1. Baseline accuracy: Establishing an accurate baseline is essential for measuring biodiversity gains. Inaccurate habitat identification or condition assessments can lead to misleading results.
2. Complexity of the tool: The tool used to measure biodiversity gains can be complex and require specialised knowledge to apply correctly.
3. Long-term maintenance: BNG improvements must be maintained for at least 40 years (duration of the operational phase), which can be challenging for developers and planners to ensure.

Despite these challenges, BNG assessments are a vital tool for promoting sustainable development and protecting biodiversity.

7 FINALISATION OF THE BEMP AND REPORTING

This OBEMP is based on several identified Habitat Management Areas: (**Figure 6.18, EIAR Volume 2a**). These HMA's were identified through discussions with the Applicant, landowners, and relevant technical specialists in order to create and enhance habitats of biodiversity value. It is the aim of Breezy Hill Energy Project to commit to 25 % BNG. The Proposed Development will optimise the BEMP following consultation and refinement post-consent.

The HMA's will likely be refined following further specialist surveys and feedback from relevant consultees. Some HMA's may therefore not be taken forward within the final BEMP, and other HMA and/or prescriptions may also be considered and agreed; however, the Applicant remains committed to delivering significant biodiversity enhancement as part of the Proposed Development.

The OBEMP will be refined and developed into a final BEMP post-consent. The final BEMP will confirm the overarching BEA encompassing all biodiversity enhancement proposals, and HMA's, where the aims, objectives and management prescriptions of the BEMP will apply.

The final BEMP will be finalised in consultation with NatureScot, relevant landowners and the advisory of an appointed Biodiversity Advisory Committee (BAC) and submitted for approval by East Ayrshire Council (EAC), by way of a suitably worded planning condition.

As above, A BAC will be invited to form and advise on the finalisation and also the implementation of the agreed BEMP. The BAC should include representatives from EAC, NatureScot, relevant landowners, the Applicant, and other relevant stakeholders including the Ayrshire Rivers Trust.

An annual report (for each of the first five years) will be submitted by Breezy Hill Energy Project and be approved by the BAC detailing the tasks (management and monitoring) completed over the last year and those planned for the year ahead.

Management prescriptions in the BEMP may be amended considering monitoring results to ensure progress towards the stated aims and objectives of the plan.

8 MONITORING

Monitoring will establish whether the proposed management prescriptions are achieving the various aims and objectives and in turn will inform adaptive management to ensure the aims and objectives are achieved through the life of the BEMP.

The Sections below outline the likely monitoring required for the Aims detailed above, however the detailed monitoring proposals will be provided in the final BEMP to be submitted post-consent and prior to the commissioning of the Proposed Development when the BEA, Habitat Management Areas and associated prescriptions have been finalised.

An indicative monitoring timetable for Aims 1-4 is provided in **Annex A**.

8.1 Aim 1: Forest to Bog Restoration (Areas 2 and 6; Figure 6.18, EIAR, Volume 2a)

The following monitoring would be undertaken to evaluate the success of this aim:

- Habitat/vegetation monitoring would evaluate the success of restoration and enhancement of peatland. This would be achieved by recording changes to the structure and composition of the vegetation and species abundance, evenness and diversity. Recording of impacts from deer/livestock would also be included in the monitoring programme, using the HIA methodology described in MacDonald et al. (1998) guidance.
- A representative sample of permanent quadrats would be established within the finalised Management Unit to gather sufficient data to inform future management and assess the trajectory of plant species and habitats. The respective monitoring surveys would be carried out at the most appropriate times of year (e.g., flora surveys versus browsing impact surveys). Repeat surveys would be carried out in the same month in each monitoring year (Years 1, 3, 5, 10, 15) to gather comparable data. Photographs would also be taken of each sample quadrat, as well as overview photographs of the Management Unit.
- A blanket bog condition assessment utilising i) the latest Biodiversity Metric condition assessment pro-forma and methodology, and/or ii) a CSM blanket bog site condition survey, at representative locations.

- The presence of encroaching self-seeded conifer trees and new broadleaved seedlings would be monitored.

8.2 Aims 2 and 3: Promote native broadleaved woodland and scrub (Areas 1, 3, 4 and 5; Figure 6.18, EIAR, Volume 2a)

Monitoring would be undertaken in HMA to ensure the establishment of the broadleaved woodland planted.

A professional forester would monitor the planted areas in Years 1-5 following planting to ensure successful establishment, specifically looking for evidence of damage (e.g., browsing) or disease. Failed specimens should be replaced in the consecutive winter (i.e., between November and March). The forester would also advise on whether any further management or maintenance is required to ensure the establishment of the trees or hedgerows. Any additional measures would be discussed and agreed within the BAC.

These areas would be monitored again by a professional forester in operational Year 10 to ensure that there are no issues with disease or invasive species and to determine if any thinning at this stage would benefit woodland establishment. Monitoring would be undertaken again in operational Year 20 when some thinning operations may be required in woodland in order to encourage growth of better trees and create more open woodland; further new enhancement/enrichment planting may also be considered at this stage. This would aid regeneration of seedlings and begin the process of establishing a mixed age structure.

Each finalised HMA's respective target habitat type and target condition category would also be assessed and monitored using the latest Biodiversity Metric condition assessment pro-forma and methodology 10 years after planting, and every 5 years thereafter.

8.3 Aims 4: Promote the creation of heath-acid grassland mosaic (Area 7; Figure 6.18, EIAR, Volume 2a)

Monitoring would be undertaken in HMA to ensure the establishment of the heath-acid grassland mosaic.

- Habitat/vegetation monitoring would evaluate the success of the habitat creation. This would be achieved by recording changes to the structure and composition of the vegetation and species abundance, evenness and diversity. Recording of impacts from deer/livestock would also be included in the monitoring programme, using the HIA methodology described in MacDonald *et al.* (1998) guidance.
- A representative sample of permanent quadrats would be established within the finalised Management Unit to gather sufficient data to inform future management and assess the trajectory of plant species and habitats. The respective monitoring surveys would be carried out at the most appropriate times of year (e.g., flora surveys versus browsing impact surveys). Repeat surveys would be carried out in the same month in each monitoring year (Years 1, 2, 3, 4, 5, 10, 15) to gather comparable data. Photographs would also be taken of each sample quadrat, as well as overview photographs of the Management Unit.

9 REPORTING & BEMP REVIEW

A report would be submitted by the Applicant (or subsequent owner of the Proposed Development) to the BMG in Years 1, 3, and 5 of operation, the frequency of reporting after Year 5 would be agreed by the BMG. This report will detail:

- management undertaken in the past year(s);
- monitoring undertaken, results and discussion of results; and
- management and monitoring proposed for the following year(s).

The BMG may meet periodically to discuss the reports and management of the Site, if this is considered necessary by the members of the BMG.

Where monitoring indicates any management objectives are not met, further management prescriptions or interventions would be agreed by the BAC.

The requirement for the measures, monitoring and reporting following Year 15 of the operational phase would be dependent on the results of the monitoring, which would be discussed and agreed within the Year 15 review report and agreed in writing with the BAC.

The BEMP would be reviewed every five years from its commencement. The purpose of the review will be to assess the effectiveness of the proposed management prescriptions at achieving the aims and objectives of the BEMP. If necessary, such measures may be amended by the BAC.

ANNEX A. MANAGEMENT AND MONITORING TIMETABLE

Table A-9-1 Indicative Management and Monitoring Timetable

Year	0*	1**	2	3	4	5	6	7	8	9	10	11	12	13	14	15...
Work Item	Year of Implementation															
Management Prescriptions																
Forest to bog restoration ((Habitat Management Areas 2 and 6)	✓	✓	✓	✓	✓											
Deer exclusion fencing (Habitat Management Areas 1, 3 and 5)	As required following staggered felling and replanting															
Ground preparation and sowing (Habitat Management Areas 1, 3, 5 and 7)	✓															
Excluded activities as per Prescription 1.5 (Habitat Management Areas 1-7)	Throughout lifetime of BEMP															
Native scattered scrub planting/creation (Habitat Management Area 4)	✓	✓														
Heath-acid grassland mosaic (Habitat Management Area 7)	✓	✓														
Heath-acid grassland mosaic management (Habitat Management Area 7)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Control competing vegetation in the first two years of scrub establishment (Habitat Management Area 4)	✓	✓														
Removal of tree tubes (Habitat Management Areas 1, 3 and 5)											✓ ³					
Scrub management (Habitat Management Area 4)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Monitoring																
Heath-acid grassland mosaic (Habitat Management Area 7)		✓	✓	✓	✓	✓					✓					✓
Vegetation monitoring and condition assessments (Habitat Management Areas 1, 3, 4, 5 and 7)		✓		✓		✓					✓					✓
Woodland establishment/growth monitoring (Habitat Management Areas 1, 3 and 5)		✓	✓	✓	✓	✓	As required									

³ Fast growing species may require the removal of trees guards before Year 10, to prevent damage. This would be informed by forestry monitoring surveys.

Year	0*	1**	2	3	4	5	6	7	8	9	10	11	12	13	14	15...
Broadleaved woodland condition assessment (1, 3 and 5)											✓					✓
Forest to Bog Restoration						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reporting / Reviews																
BEMP Report		✓		✓		✓	Reporting schedule after Year 5 to be agreed by the BMG									
BMG 5-year review of BEMP						✓					✓					✓

* Construction Phase

**First year after final commissioning of the Proposed Development / Operational Year 1

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