

Tangy IV Wind Farm Section 36C Variation

Technical Appendix 7.2: Habitat Management Plan for Proposed Varied Development

TANGY IV WIND FARM

Habitat Management Plan for Proposed Varied Development

REPORT

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EXECUTIVE SUMMARY

The nature of the Tangy IV development in that woodland felling and construction of the Tangy IV Wind Farm is required in tandem with the decommissioning of redundant infrastructure at the existing Tangy I and II Site lends itself to a phased approach within the Habitat Management Plan (HMP). This phased approach has been established to realise the habitat creation and enhancement opportunities that exist at the Site and to provide the greatest nature conservation benefits.

This HMP is therefore split into three broad habitat creation and enhancement Objectives:

- Forest to bog peatland restoration that can be completed post felling but with commitments to undertake restoration pre-construction (56ha already completed) and peatland restoration that can be completed during the construction and operational phase of the wind farm (23.48ha).
- Open moorland peatland restoration that can be completed during construction with peat arisings to aid the decommissioning of the existing Tangy I and II Site. This will apply to two spur roads as a minimum and could restore hydrological connectivity to a further 14.5ha.
- Broadleaved woodland planting (6.78ha) to benefit habitats and species at the site, to be completed during the operational phase of the development in addition to the 3.5ha provided for by the proposed developments Long-Term Forestry Plan (LTFP).

This HMP also includes for monitoring to measure the success of each of the prescription activities above and a long-term commitment within the HMP to monitor in proximity to turbine bases for bat carcasses to identify potential conflicts (collisions) with the wind turbines (Objective 4 of this HMP).

The objectives above build upon the proposals and Aims in the outline HMP (OHMP) which was submitted with the Tangy IV planning application with the intention of providing additional nature conservation benefits. The original OHMP commitments include:

- Broadleaved Woodland Creation – An area of 3.5 ha was identified in the ecological study area as suitable for the creation of broadleaved woodland, as shown in Figure 16.2 of the ES. The 3.5ha of woodland creation originally identified has been included in the LTFP for the site and will be managed through the LTFP. This HMP also includes provision for a further 6.78ha of native broadleaved woodland planting at the Killarow and Tangymoil landholdings realising a total of 10.28ha of native woodland creation.
- Peatland Restoration – An area of 27.7 ha was identified as suitable for active peatland restoration within the areas of proposed felling, as shown in Figure 16.2 of the ES. This area, in agreement with FLS and changes to restock guidance on deep peat areas will increase. A total of 56ha of peatland restoration has been completed to date with an additional 10ha earmarked for restoration in development and potentially a further 44ha during the operational phase of the development, subject to agreement with the landowner and Forestry Enterprise. There are also opportunities to enhance 14.5ha of peatland during the decommissioning of the Tangy I and II sites by using peat arising during the construction of the Tangy IV Site. Overall, this HMP has the potential to restore and enhance up to 124.5ha of peatland habitat.
- Post-Construction Carcass Searches for Bats – Dedicated searches for bat carcasses would be carried out on a monthly basis within a 50 m radius of each turbine. This commitment remains unchanged but further detail on the searches is provided.

In consultation with NatureScot, due to the presence of Greenland white-fronted geese on the Kintyre peninsula and proximity of potential goose roosting lochs, works prescribed in this HMP will be timed out with the overwintering period for Greenland white-fronted geese (October – late March), if possible. Alternatively, any works undertaken during the over-wintering period, including all vehicle access, forestry and peatland restoration activities within 600m of the loch should only take place between 1 hour after sunrise and 1 hour before sunset to avoid disturbance of roosting geese.

1 INTRODUCTION

1.1 Tangy Wind Farm Background

Tangy Wind Farm is a Scottish and Southern Energy Renewables (SSER) operational wind farm comprising of Tangy I and II developments, located on the Mull of Kintyre approximately 8.5 km north of Campbeltown, Argyll and Bute. Tangy I and II have been operational since 2003 and 2007, respectively. Figure 1 provides the layout of the overall operational development.

Submission of the Tangy III Wind Farm proposals were made in 2014 to expand the wind farm development into the forestry to the north of the operational wind farm. Proposals sought to decommission the original wind turbines, reconfiguring the layout of the development in this area, allowing larger machines to be used across the new expanded wind farm.

The Tangy IV Wind Farm submission builds on the superseded Tangy III proposals, with proposals submitted in 2018 and a consent granted in December 2019 for a Repowering and decommissioning of the operational site via a 16-turbine development of a maximum tip height of 149.5m. Figure 2 provides the layout of the proposed Tangy IV development.

In support of the Tangy IV submission both ecological and ornithological receptors were considered informed by up-to-date field and desk-based assessments. No significant effects to receptors were identified during the construction or operational phases of the development. However, it was acknowledged the development is located in proximity to the Kintyre Goose Roost Special Area of Protection (SPA), which is designated for the population of non-breeding Greenland white-fronted goose (*Anser albifrons flavirostris*) it supports during winter months. The closest known goose roosting location associated with the SPA is the Tangy Loch being approximately 580m west of the HMP Area. Additionally, the Lussa Loch is approximately 1.5km east of the wind farm. Furthermore, effects to habitats to be lost beneath the footprint of the development and from pollution related incidents were identified, along with potential operational effects to bat species. Full assessment summaries from both Ecology and Ornithology Environmental Impact Assessment Report (EIAR) chapters are provided in Appendix 1 of this Habitat Management Plan (HMP) for completeness.

As shown in Appendix 1, whilst a number of potential impact pathways have been identified during the impact assessment for the Tangy IV Wind Farm, only those associated with habitat loss and operational effects to bats were considered to be required to be addressed via a Habitat Management Plan. Other effects identified were to be mitigated through appropriate construction methods detailed in the Construction Environment Management Plan (CEMP). In support of the submission, an outline Habitat Management Plan was provided (Appendix 10.6 of the 2018 ES submission). Key actions outlined in this document were:

1. **Broadleaved Woodland Creation** – An area of 3.5 ha was identified in the ecological study area as suitable for the creation of broadleaved woodland, as shown in Figure 16.2 of the ES. Woodland creation would be targeted along burn sides and around the badger setts identified within the ecological study area.
2. **Peatland Restoration** – An area of 27.7 ha was identified as suitable for active peatland restoration within the areas of proposed felling, as shown in Figure 16.2 of the ES. Restoration would involve actively encouraging the regeneration of degraded peatland habitats, principally through raising the water table.
3. **Post-Construction Carcass Searches for Bats** – Dedicated searches for bat carcasses would be carried out on a monthly basis within a 50 m radius of each turbine.

Figure 16.2 of the EIAR is replicated in Figure 3 of this Habitat Management Plan.

Further to the above commitments set out in the development's submission, the following is included as a condition of the development's consent, granted in December 2019:

“21. Habitat Management Plan

(1) No development shall commence until a detailed Habitat Management Plan (HMP) has been submitted to, and approved in writing, by the planning Authority in consultation with SNH. The HMP shall include measures to secure the restoration of peatland outlined in Appendix 10.6 if the EIA report.

(2) All works on site must be undertaken in accordance with the approved Habitat Management Plan unless otherwise agreed in writing by the Planning Authority and the identified measures shall be implemented in accordance with the methods approved and the durations identified in the approved HMP.

Reason: To secure the restoration of peatland.”

It should be noted that there is no existing Habitat Management Plan associated with the Tangy I or II Wind Farms. As such, consideration does not need to be given to any ongoing HMP activities associated with the consents for these developments.

1.2 Work Instruction

In consultation with NatureScot, due to the presence of Greenland white-fronted geese on the Kintyre peninsula and proximity of potential goose roosting lochs, works prescribed in this HMP will be timed outwith the overwintering period for Greenland white-fronted geese (October – late March), if possible. Alternatively, any works undertaken during the over-wintering period, including all vehicle access, forestry and peatland restoration activities within 600m of the loch should only take place between 1 hour after sunrise and 1 hour before sunset to avoid disturbance of roosting geese.

2 PHASE 1 HMP ACTIVITIES

2.1 Objective 1 – Forest to Bog Restoration

Through the use of forest to bog techniques, restore a minimum of 79.48ha of previously afforested peatland habitats.

2.1.1 Restoration Area Identification

Appendix 10.6 of the Tangy IV Environmental Impact Assessment Report (EIAR) identified some 27.7 ha of peatland beneath forestry which would be suitable for restoration. The area identified is provided in Figure 3. Subsequent to the submission of the Tangy IV application, amendments to the Long-Term Forestry Plan for the development have been made, in particular across Forestry and Land Scotland owned ground and their aspiration for increased peatland restoration in preference to woodland restocking. Figure 5 provides the revised Long-Term Forestry Plan (LTFP) for the area and highlights the increase in forestry to bog restoration ground available (79.48 ha) on FLS land and at Lagalgarve forestry block.

To date 56ha of peatland within the FLS landholding has been restored and a further 3.71ha is planned during construction. The remaining 19.77ha is within the Lagalgarve forestry block and will be restored during the operational phase of the development. Whilst 79.48ha of forest to bog restoration has been identified at this point, opportunities to maximise the peatland restoration area will be prioritised.

To inform both the design of the proposed development and potential restoration opportunities, wide scale peat probing has been completed across the area; an interpolate peat depth map and the associated probing locations are provided in Figure 6. In conjunction with the assessment of peat depth, mapping of drainage feature has been completed. Drainage features are primarily associated with the forestry which has now been removed and would have been created to drain the ground to improve growing conditions for the forestry crop. The drains will continue to export water from the area degrading the peat resource present until restoration activities commence.

To progress the restoration of peatland habitats, post deforestation of this area of ground, SSER and FLS have commenced the restoration works within this area. Figure 7 provides the current lease area from FLS which equates to c. 70ha. Of this, 56ha has been restored and a further 3.71ha of suitable degraded peatland will be restored by SSER during the construction phase of the development.

Further to the restoration of the FLS lease area ground, additional ground is available for restoration. A total of 19.77ha is secured which is the overlapping ground from the Outline Habitat Management Plan (Figure 3) on the Lagalgarve Forestry area. This area has been identified to the west of the proposed development in an attempt to restore the entire peatland hydrological unit as part of the wind farm development. The area of ground is provided in Figure 4. Peat probing to determine the suitability of the area for peatland restoration has been completed in 2024, the results of this field work are provided in Figure 8. Management of this ground for peatland restoration will be included in the Long-Term Forestry Management Plan for the area as per the requirements of the FLS ground as detailed above. Restoration of the area will be completed in the first 3 years of operation of the development using appropriate methods as detailed in section 2.1.2 below.

2.1.2 Restoration Methods

Given the location of the restoration area, methods of restoration will follow best practice guidance as outlined in the NatureScot's Peatland ACTION – Technical Compendium: 8 Restoration- Forest to Bog Restoration¹. Restoration techniques are, however, constantly improving with novel methods developed as our understanding improves of how peatland habitats respond to various management methods. As such, the most appropriate and up to date methods will be used across the proposed restoration area dependent on the feature to be restored.

At this time, it is envisaged that peat smoothing methods will be the most appropriate to use across the forest to bog restoration area. This method involves the infilling of the residual furrow topography left by previous forestry activities. Stump-flipping will also be completed to fill in large drains with the up-turned

¹ <https://www.nature.scot/doc/peatland-action-technical-compendium-restoration-8-forest-bog-restoration> (accessed 04.01.24)

stumps pressed / compacted into the ground. It is not considered appropriate to attempt to remove the brash remaining from felling activities; this is likely to be rotten by the time restoration commences, a costly activity to remove that could result in adverse effects to the underlying habitats through additional tracking of machinery across the area. Where brash is present this will be used along with up-turned stumps to fill in drains. Given the size of some of the stumps left from felling activities consideration will be given to further grinding / mulching these to reduce their height and increase the ease in which they can be flipped / compressed into the peat to infill surface drainage features.

Once all brash movement and stump-flipping has been completed, the ground will be cross tracked perpendicular to the direction of the slope to compress / smooth the ground, leaving a level smooth surface suitable for recolonisation of bog plant species. Similarly, it has been shown that this method is effective in rapidly slowing water loss from restored areas and is being used in other felled areas of the surrounding national forest estate in proximity to the Tangy Wind Farm.

2.1.3 Management and Monitoring Timescales

Restoration has been completed of the majority of the FLS ground (56ha). The remaining restoration in this area (c.10ha) will be completed through the construction phase of the development. Restoration of the western area (Lagalarve) beneath the existing conifer crop will be completed in years 1-3 of the operational phase of the development. Restoration will be phased through autumn and winter to avoid the breeding bird season.

Follow up visual monitoring of the stability of all additional restoration activities will be undertaken six months after each phase of works to assess the success of the capital works and ensure any follow up actions are completed timeously.

To inform the success of restoration activities both vegetation and hydrological monitoring will be implemented. A suite of dipwells will be placed across the restoration areas prior to ground smoothing activities commencing where works have not already been implemented by FLS. Monitoring the watertable within these dipwells will be completed monthly for six months prior to restoration activities commencing to determine the existing water table regime.

Following all restoration activities monthly monitoring of dipwells will be completed for the first year to assess if watertables have stabilised and are present in proximity to the ground surface.

Vegetation monitoring will be completed post restoration along 100m line transects crossing the restoration areas coupled to the dipwell monitoring locations. Monitoring will seek to assess the vegetation compositions at mini quadrats (50x50cm) at 10m intervals and will include species assemblage, coverage, presence of bare ground, presence of the watertable at ground surface level, presence of regeneration of the conifer crop and evidence of herbivore damage e.g. poaching or browsing. Vegetation monitoring will be completed one year following restoration activities, then in operational years 3, 5, 10, 15 and 25 of the Habitat Management Plan. In each of the monitoring years, further monitoring or management activities e.g. removal of conifer crop regeneration will be provided as recommendations in the monitoring reports to aid the peatland recovery and delivery of this HMP's aims and objectives.

2.1.4 Reporting

Reporting of the activities completed against Objective 1 will follow that of the pre- and post-restoration monitoring timetable. Reporting will be completed in each year in which actions are completed. Updates to this document will be made as required following completion of each round of monitoring.

2.1.5 Assessing the Success of Blanket Bog Restoration

The aim of the blanket bog restoration is to achieve 80% coverage at monitoring locations by species attributable to recognised National Vegetation Classification bog / mire communities with the water table present or within 20cm of the ground surface throughout the year.

2.2 Objective 2 – Broadleaved Woodland Creation

Create 6.78ha of native broadleaved woodland at Killarow and Tangymoil Farms. This is in addition to the 3.5ha stated in the LTFP.

2.2.1 Long-term Forest Plan

Figure 5 provides the updated Long-Term Forestry Management Plan for the area which incorporates elements of broadleaved woodland creation surrounding watercourses within land previously afforested with a conifer crop. These areas equate to approximately 3.5 ha.

2.2.2 HMP Broadleaved Woodland Creation

Outwith the LTFP, surveys of the ground at Tangymoil and Killarow Farms has identified suitable ground for additional native woodland creation totalling 6.78ha. These areas are also highlighted on Figure 5 and will be progressed under this HMP

Inclusion of such planting will provide additional benefits to the watercourses including shading. Increases in riparian and woodland edge broadleaved planting will act to provide enhanced wildlife corridors and habitat benefiting mammals such as badger and otter and woodland edge birds.

All riparian woodland planting would follow Scottish Environment Protection Agency (SEPA, 2009) guidance with any areas away from riparian corridors being cognisant of Forestry Commission Bulletin 112 "Creating New Native Woodland" (1994). All details of additional woodland planting including species, planting plans and ground protection measures will be provided separately to this HMP during the construction phase of the development, in anticipation of planting the woodlands in years 1-3 of operation.

2.2.3 Management and Monitoring Timescales

Woodland creation and management activities will be implemented in years 1-3 of operation. Woodland planting will take place outwith the breeding bird season to avoid potential disturbance to such species.

Woodland monitoring should be completed in each planting area following the first year of planting to ascertain successful establishment and the requirement to beat up any areas which are deemed to be failing.

Further monitoring should be completed every five years following commencement of operation of the development until it is determined the woodlands have successfully established (when 80% planted trees reach 1.5m in height). The monitoring shall include at a minimum, the number of losses (percentage survival), plant health (including any signs of pathogens) and herbivore impact.

2.2.4 Reporting

Reporting on management activities, associated monitoring and progress against the above activities and targets will be completed in annual monitoring reports to statutory consultees in the years in which works are completed. All monitoring reports will be shared with forestry professionals delivering the Long-Term Forest Plan (LTFP) in the commercial forestry to inform cull targets and presence / impact of deer species on the woodland at the Tangy IV wind farm site.

2.2.5 Assessing the Success of Native Woodland establishment

Success of the HMP native woodland establishment at the Tangy IV Wind Farm will be determined when the HMP planted areas are of similar species composition and structure to other older native woodlands in the surrounding area. An indicator of this will be when approximately 80% of all trees within the identified planting areas have reached a height of 1.5m or more. No target of stems/ha has been set as a mosaic of woodlands across the areas is desired, but the overall aim will be to create a low stem density woodland, planted with irregular spacings to provide maximum benefit for species and mirror typical (natural) woodland density patterns in the region

3 PHASE 2 HMP ACTIVITIES

3.1 Objective 3 – Peatland Restoration of Non-Afforested Habitats and Areas of Previous Infrastructure

Utilise peat arising from construction to restore hydrological connectivity in the decommissioning of the existing Tangy I and II site to the benefit of 14.5ha of peatland habitat.

3.1.1 Identification of Potential Restoration Area

Figure 9 provides the National Vegetation Classification (NVC) survey information collated for the Tangy IV Wind Farm planning submission. Figure 10 identifies peatland habitats from the NVC surveys which have been bi-sected by infrastructure relating to Tangy I and II Wind Farms which will be decommissioned and not form part of the Tangy IV development. Where peatland habitats surround proposed decommissioned infrastructure, opportunities exist to remove these hydrological barriers within the peatland environment. This will have the aim of recreating a cohesive hydrological unit and improving the condition of the surrounding peatland habitats.

A desk-based assessment using the information provided in Figure 9 identifies approximately 14.5 ha of peatland habitats which are bi-sected by former wind farm infrastructure or within a 15m buffer which may have been affected hydrologically causing alterations to the habitats present. A further ground truthing exercise should be completed of the peatlands identified to determine their condition, the effects that infrastructure has had to the species present and hydrological regime, and the relevant opportunities available for improvement of these habitats through the decommissioning process and the reuse of peat from construction of the Tangy IV Wind Farm.

3.1.2 Reuse of Construction Related Materials

It is envisaged that materials including both stone, clay and peat may be available from the construction of the Tangy IV Wind Farm, and where appropriate these may be re-used in the restoration of the existing wind farm development where infrastructure cannot be incorporated into the new development's design. This requirement is similarly detailed in *Condition 10. Decommissioning Method Statement – Tangy I and Tangy II*, of the development's consent. Initial details surrounding the decommissioning works are provided in Chapter 5.4 of the Tangy IV EIA Report. *Condition 13. Peat Management Plan* also details the requirements for consideration of the re-use of peat, and the requirements of this document will need to be incorporated into any restoration proposals.

Access track decommissioning methods are currently under trial within SSER as part of a PhD research project in collaboration with the Environmental Research Institute (University of the Highlands and Islands (UHI), Thurso) and the wider Renewables Industry. Findings and recommendations from academia, industry and regulators will be used to guide the principles of restoration when decommissioning the Tangy I and II wind farms.

All restoration activities will consider the requirements of the Peat Management Plan for the development, along with the associated Peat Slide Risk Assessment. For each area of restoration, a dedicated plan will be created detailing the methods to be used, the location and type of material to be used in the restoration activities, and the monitoring to be implemented at the location. The plan will also include details of sediment management to ensure that such activities do not have a detrimental effect to watercourses within and surrounding the wider development.

3.1.3 Management and Monitoring Timescales

Monitoring of watertables in proximity to the areas of infrastructure restoration should be implemented six months prior to activities taking place. Vegetation monitoring will be paired to the hydrological monitoring with 100m transect cross the restoration areas and 50 x 50 cm mini quadrats completed at 10m intervals. Data collected will include the percentage cover of species, a complete species list, an assessment of sward density using the drop-disc method, with additional notes taken surrounding the quality of the habitats including evidence of browsing and poaching from herbivores.

Hydrological monitoring will utilise dipwells installed using 50mm wide land-drain inserted vertically into a pre-drilled hole in the peat substrate. Prior to the first monitoring visit being completed, two weeks will be allowed to elapse to allow the watertable to readjust following the dipwell installation. Monitoring of the water table height should be undertaken at monthly intervals to ascertain the behaviour and fluctuations in the water table. Monitoring should continue for 12 months post restoration to assess the changes in the water table's behaviour in the area.

Control points within the same peatland hydrological unit will be selected. These will be a sufficient distance from current infrastructure locations that they will exhibit typical peatland hydrological regimes and vegetation communities, and therefore deemed unaffected by the construction of the Tangy I and II Wind Farms.

Further monitoring of water tables and vegetation assemblages should be completed in years 1, 3, 5, 10, 15 and 25 of the wind farm's operational lifespan. Should monitoring identify additional interventions are required to improve the quality of the habitats present and their hydrological function, additional management activities and monitoring may be recommended.

Reporting of all surveys will be provided in the annual HMP report provided to statutory consultees in the years where monitoring is completed.

3.1.4 Assessing the Success of Peatland Restoration Activities

Success of activities will be judged by an increase in the coverage of peatland vegetation at each monitoring location. It is noted that there is unlikely to be a year-on-year alteration in diversity and coverage as the vegetation moves from a successional process to a more established community as this is a relatively slow process, and the monitoring frequency is designed to reflect this. All results will be compared to the selected control points for each restoration area. The restoration will be determined a success when survey results from restoration areas are comparable in nature to the control points.

3.2 Objective 4 – Monitoring of Turbine Locations for Bat Casualties

Monitor all turbine bases on a monthly basis to check for bat fatalities associated with the operation of the wind turbines.

3.2.1 Monitoring Requirements

The Tangy IV EIAR assessed the potential operational effects to bats from collision and barotrauma caused by the wind turbines as Not Significant. However, to reduce the potential effects to bat species measures were outlined in the Ecology Chapter, these include the provision of an appropriate buffer from features used by bat species and the rotor-swept area of any turbine, and compensatory planting to increase foraging resources for the species.

The Habitat Management Plan submitted as Appendix 10.6 to support the EIAR submission detailed monitoring to be implemented through the operational period of the development to assess the potential ongoing effects of the development to bats. This monitoring would be limited to carcass searches on turbine hardstandings and a 50m radius of the ground surrounding the turbines to identify bat collisions as a result of the operation of the turbines. A dedicated search for bat carcasses shall be carried out on a monthly basis at each turbine location:

- Searches shall be centred on each turbine and shall cover a minimum radius of 50m from the base of the turbine. This encompasses the area where carcasses are most likely to be found.
- The area of hardstand and surrounding vegetation within the defined radius shall be walked and a visual inspection of the area shall be carried out for carcasses.
- Areas around ancillary infrastructure (stairs, fans, package subs. Etc.) shall also be searched as part of the check

Taking forwards the proposals provided in support of the EIAR submission, monitoring of turbine hardstandings across the Tangy IV Wind Farm will be completed monthly during the bat activity season (April – October inclusive) for the first two years of the development. Results from the monitoring will be considered

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following this monitoring period and conclusions made surrounding the requirements for ongoing monitoring. If negative effects are identified alternative mitigation proposals may be recommended.

Figures

Figure 1: Tangy I and II Wind Farms Operational Developments

Figure 2: Tangy IV Wind Farm Consented Layout

Figure 3: Figure 16.2 of Tangy IV Environmental Impact Assessment Report; Submitted Outline Habitat Management Plan

Figure 4: Proposed Updated Habitat Management Plan Actions

Figure 5: Tangy Wind Farm Long Term Forestry Management Plan (LTFMP)

Figure 6: Peat Probing Results of Forestry and Land Scotland Restoration Area

Figure 7: Revised Forestry and Land Scotland Restoration Area

Figure 8: Peat Probing Results of Additional Peatland Restoration Area

Figure 9: National Vegetation Classification Survey Results

Figure 10: Peatland Habitats Affected by Tangy I and II Wind Farms

Appendix A - Environmental Statement Assessment Summaries

Table A1: Summary of Ecology Impact Assessment

Ecological Feature	Potential Impact	Pre-Mitigation Effect Significance	Mitigation/Good Practice Measures Proposed	Implementation	Residual Effect Significance
Construction					
Habitats, including GWDTE	Habitat loss or modification/degradation	Adverse but not significant	Avoidance of sensitive habitats, micro-siting, reduction of impacts on GWDTE	Design and CEMP	Not significant
Aquatic habitats, Tangy Loch SSSI and fish	Accidental pollution or siltation of water bodies and habitats	Adverse on aquatic habitats and fish but not significant Significant adverse effect on Tangy Loch SSSI	Exclusion zones around watercourses agreed with SEPA and pollution and siltation prevention measures	CEMP	Not significant
Bat species	Loss of foraging habitat	Adverse but not significant	N/A	N/A	Not Significant
Otter	Disturbance	Not significant	Pre-construction protected species survey, CEMP exclusion zones around watercourses agreed with SEPA and pollution and siltation prevention measures		Not significant
Badger	Disturbance	Not significant	Pre-construction protected species survey and badger protection plan to minimise disturbance to setts	ECoW present on site during construction/felling works around badger setts	Not significant
Pine marten	Habitat loss and disturbance	Not significant	Pre-construction protected species survey	ECoW	Not significant
Reptiles	Disturbance and accidental killing/injury of reptiles	Not significant	Pre-construction survey and ECoW present to translocate any reptiles	ECoW present on site during construction in suitable reptile habitats	Not significant
Operation					
Habitats	Habitat restoration and creation	Significant beneficial effect	Restoration of 27.7 ha of peatland habitat and the creation of 3.53 ha of native broadleaved woodland	HMP	Significant beneficial effect
Aquatic habitats, Tangy Loch SSSI, otter and fish	Pollution or siltation of water bodies and habitats	Adverse but not significant for habitats, otter and fish Significant adverse effect for Tangy Loch SSSI	Pollution and siltation prevention measures	Spill kits stored on site (e.g. in central store in ops building) and carried in site vehicles when undertaking maintenance works	Not significant
Bat species	Mortality from collision or barotrauma and disturbance or displacement	Not significant	Maintenance of an 87m buffer between forestry replanting and turbines. Compensatory planting would also include areas of increased biodiversity with the planting of broadleaved species. Compensatory planting could provide new foraging and commuting areas	HMP	Not significant, potential for beneficial effect from compensatory planting
Badger	New foraging areas produced from removal of coniferous plantation	Beneficial but not significant	N/A	N/A	Beneficial but not significant
Pine marten	None predicted	N/A	N/A	N/A	N/A
Reptiles	None predicted	N/A	N/A	N/A	N/A
Decommissioning					
Habitats	Habitat reinstatement	Not significant	Regeneration of habitats following removal of wind farm infrastructure and access tracks	CEMP	Not significant

Receptor	Construction/ Decommissioning	Operation – Collision	Operation – Displacement	In-Combination	Residual
Greenland white-fronted goose	Negligible, Not Significant No potential to adversely affect the integrity of the Kintyre Goose Roosts SPA	Negligible, Not Significant No potential to adversely affect the integrity of the Kintyre Goose Roosts SPA	Negligible, Not Significant No potential to adversely affect the integrity of the Kintyre Goose Roosts SPA	Negligible, Not Significant No potential to adversely affect the integrity of the Kintyre Goose Roosts SPA	Negligible, Not Significant No potential to adversely affect the integrity of the Kintyre Goose

Appendix B - Summary Gantt Chart of Survey Activities

Table B2: Gantt Chart of Timeline of Habitat Management Plan Activities

Gantt Chart of Timeline of Habitat Management Plan Activities													
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2038	2041	2048
		1	2	1	2	1	2	3	4	5	10	15	25
Objective	Prescription and Monitoring	Pre-Construction		Construction		Operation							
1. Forest to Bog Restoration	Completion of restoration of remaining Forestry and Land Scotland (FLS) Ground (10ha)												
	Hydrological monitoring of FLS Ground (Existing restored ground (56ha) and pre-restoration of remaining 10ha area)												
	Vegetation monitoring of all FLS Ground												
	Restoration of additional Lagalgarve ground (19.77ha)												
	Hydrological monitoring of Lagalgarve restoration area												
	Vegetation monitoring of Lagalgarve restoration area												
2. Broadleaved Woodland Creation	Riparian woodland planting in line with the Long-Term Forestry Management Plan												
	Native woodland creation across Tangymoilie and Killarow Farm Areas												
	Woodland establishment monitoring												
3. Peatland restoration of non-afforested areas associated with decommissioning of Tangy I & II Wind Farms	Removal of existing infrastructure and re-use of materials from the Tangy IV Wind Farm Construction Phase												
	Hydrological monitoring of restoration areas and surrounding peatland habitats												
	Vegetation monitoring of restoration areas and surrounding peatland habitats												
4. Monitoring of turbine location for bat casualties	Monitoring of turbine hardstandings to identify if the development is causing bat mortalities from barotrauma												

