Chapter 16 Schedule of Environmental Commitments

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List of Abbreviations

Abbreviation	Description
AIL	Abnormal Indivisible Loads
BSI	British Standards Institution
CAA	Civil Aviation Authority
CAR	Controlled Activities Regulations
CEMP	Construction Environment Management Plan
CTMP	Construction Traffic Management Plan
FMMP	Fish and Macro-invertebrate Monitoring Programme
HES	Historic Environment Scotland
HMP	Habitat Management Plan
OEMP	Operational Environmental Management Plan
oOAP	Outline Outdoor Access Plan
PMP	Peat Management Plan
SEPA	Scottish Environment Protection Agency
THC	The Highland Council
TMP	Traffic Management Plan
TPC	Travel Plan Coordinator

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16. Schedule of Environmental Commitments

16.1 Introduction

16.1.1 Best practice in EIA recommends the use of a Schedule of Environmental Commitments, which can act as a quick reference for anyone interested in the mitigation measures to which the Applicant has committed to implementing and upon which the assessment of residual effects presented in this EIA Report has been based. It will be utilised by the Applicant's design team throughout development of the detailed design, and the appointed Contractors will be required to allow for, and ultimately implement, each of the measures in this schedule as a minimum at the construction stage.

16.1.2 **Table 16.1** presents a Schedule of Environmental Commitments for the Proposed Development, listed according to the relevant environmental topic area.

Table 16.1 – Schedule of Environmental Commitments

Environmental Subject Area	Environmental Commitment	Timing
The Proposed Development		
Micrositing	A micrositing allowance of 50 m in all direction is being sought in respect of each turbine in order to address any potential difficulties which may arise in the event that pre-construction surveys identify unsuitable ground conditions or unforeseen environmental constraints. It is proposed the final positioning will be addressed through an appropriately worded condition.	Construction
Turbine, turbine foundations & crane hardstanding	A full ground investigation will be completed prior to construction. This will inform final foundation and crane hardstanding design.	Pre-construction
	Detailed construction drawings with final dimensions will be provided prior to commencement once the final turbine model has been selected.	Pre-construction
	Turbines will be painted an off-white or light grey colour with low reflectivity semi-matt finish, or similar, as agreed with the Local Planning Authority.	Operation
Access tracks	Existing onsite access tracks and wayleaves, where possible, will be retained, re-used and upgraded (where necessary).	Construction
	New access tracks will be made of locally sourced material, potentially from on-site borrow pits (if suitable).	Construction
	Prior to construction, any required improvements to public roads will be undertaken and appropriate highway safety measures will be agreed with The Highland Council (THC) and Transport Scotland, with necessary signage or traffic control measures implemented throughout the construction phase on the agreed basis.	Pre-construction
Water crossings	The final solution and detailed design for all water crossings, including any potential upgrades or amendments required to existing crossings, will be addressed through an appropriately worded condition and in accordance with the requirements of the Water Environment (Controlled Activities) (Scotland) Regulations 2011.	Pre-construction
Drainage	A detailed drainage design will be undertaken and submitted to the Scottish Ministers, in consultation with the Scottish Environment Protection Agency (SEPA), for approval prior to construction.	Pre-construction
Grid connection & energy storage	The design of the components of the substation and energy storage compound is proposed to be secured by an appropriately worded condition.	Pre-construction

Environmental Subject Area	Environmental Commitment	Timing
Construction compounds & temporary laydown area	Prior to commencement of construction, a detailed appraisal of the areas will be required, including an assessment by the project ecologist and also trial pits and /or boreholes to confirm the nature of the sub-strata.	Pre-construction
	The detailed location, size and engineering properties of the construction compounds and temporary turbine laydown area will be confirmed prior to the start of construction, after the turbine supplier and model have been confirmed.	Pre-construction
	On completion of construction works, it is proposed that all temporary structures be removed and the compound areas be restored.	Post-construction
Borrow pits	Detailed site investigations prior to construction will be carried out to further confirm the rock type, rock characteristics and suitability, as well potential volumes to be extracted from the search area. The final borrow pit(s) identified during the geotechnical evaluation will be defined within the Construction Environmental Management Plan (CEMP).	Pre-construction
Construction hours	Normal construction hours will be between 07:00 and 18:00 Monday to Friday and 07:00 to 13:00 on a Saturday. During the turbine erection phase, operations may proceed round the clock to ensure that lifting processes are completed safely. Delivery of abnormal loads may be made out with normal construction hours, as agreed with the relevant authorities.	Construction
Construction traffic	The Applicant will ensure that the vehicles will be routed as agreed with THC, Transport Scotland and Police Scotland.	Construction
Construction Environment Management Plan (CEMP)	The Contractor shall produce and adhere to a CEMP. This shall be developed in consultation with the Scottish Ministers, NatureScot, SEPA, Historic Environment Scotland (HES) and THC. The Contractor shall amend and improve the CEMP as required throughout the construction and decommissioning period.	Pre-construction
	The CEMP shall describe how the Contractor will ensure suitable management of, but not limited to, the below aspects during construction of the Proposed Development. A draft CEMP is included in **Appendix 3.1**: • noise and vibration; • dust and air pollution; • surface and groundwater; • ecology and ornithology (including protection of habitats and species);	Pre-construction

Environmental Subject Area	Environmental Commitment	Timing
	• agriculture (including protection of livestock and land); • cultural heritage; • waste (construction and domestic); • details of the size, location and volumes to be extracted from borrow pits; • pollution incidence response (for both land and water); and • site operations (including maintenance of the construction compound, working hours, monitoring of construction procedures and safety of the public).	
	Prior to commencement of construction activities, a pollution prevention strategy, contained within a CEMP, will be agreed with SEPA.	Pre-construction
Operational Environmental Management Plan (OEMP)	The Applicant will develop an OEMP in consultation with the Scottish Ministers, NatureScot, SEPA and THC. The OEMP will set out how the Applicant will manage and monitor environmental effects throughout operation.	Pre-operation
Public Access	No access to any Core Paths or Rights of Way will be restricted by the Applicant during the construction, operation and maintenance of the wind farm. There will be some restriction of public access during construction of tracks and turbines, however the Applicant aims to maintain public access to the project site during the construction of the Proposed Development where there would be no health and safety risk. The Applicant has provided an Outline Outdoor Access Plan (**Appendix 3.2**) which will be further consulted upon. It sets out a proposal to create a new public path, Dunearn Footpath, leading to a viewpoint from which there will be a view of Lochindorb Castle from the north western side of Lochindorb.	Construction
Landscape and Visual		
The primary mitigation adopted in relation to the Proposed Development is embedded within the design of the Proposed Development and relates to the consideration that was given to avoiding and minimising landscape and visual effects during the evolution of the Proposed Development layout.		
Turbine Lighting	Mitigation of visible turbine lighting has been designed into the scheme by adopting a cardinal lighting scheme where only the outermost turbines are lit (Turbines 1, 3, 14, 15 and 17). Further mitigation has been incorporated to reduce the intensity of lighting in certain atmospheric conditions by reducing the intensity and attenuating the amount of vertical downwards lighting in order to reduce the visual impact experienced by receptors below the lights.	Operation

Environmental Subject Area	Environmental Commitment	Timing
Ornithology		
Habitat Management Plan (HMP)	It is proposed that post-consent and as part of the proposal, a detailed HMP will be produced, secured by planning condition and discharge by local planning authorities. The proposed principle aims of this plan will be: • To restore blanket bog and wet heath habitats in an area within the site with associated benefits for upland species such as black grouse, curlew and golden plover; and • To encourage areas of deep heather in an area away from turbines in order to provide alternative nesting habitat for hen harrier, merlin and short-eared owl. This will be done by managing the heather burning/cutting regime. **Appendix 8.3** provides and outline of the proposed HMP.	Operation
Bog and Wet Heath Restoration	The bog and wet heath restoration will be achieved by ditch blocking to rewet drained areas of peatland which will benefit upland waders nesting within the site. A monitoring regime will be included as part of this plan in order to assess the effectiveness of management measures implemented as part of the HMP.	Operation
Ecology and Nature Conservation		
Habitat Management Plan (HMP)	A Habitat Management Plan (HMP) for the Proposed Development will be provided, subject to consultation with the landowner, NatureScot and THC. The main aim of this HMP will be to improve and restore areas of wet heath and modified bog within the site boundary. A monitoring regime will be included as part of this plan in order to assess the effectiveness of management measures implemented as part of the HMP.	Operation
Fish and Macro-invertebrate Monitoring Programme (FMMP)	A comprehensive Fish and Macro-invertebrate Monitoring Programme (FMMP) will be produced in consultation with NatureScot and local fishery boards to monitor the watercourses and the species that depend on them. The monitoring will commence during the pre-construction phase and continue during the period of construction of the Proposed Development. The requirement for operational monitoring will be determined following completion of the pre-construction and construction monitoring.	Operation
Hydrology, Hydrogeology and Geology		
Pre-construction Site Investigations	Pre-construction site investigations will be conducted to determine the ground and groundwater conditions across the site, focusing on areas where construction is proposed to inform micrositing. The investigations will include targeted monitoring and assessment of the groundwater levels and flows beneath the site. The investigations within the borrow pit search areas will allow selection of specific extraction areas and avoidance of deep peat.	Pre-construction

Environmental Subject Area	Environmental Commitment	Timing
Watercourses	A 50 m buffer will be maintained around all surface watercourses wherever possible, except where watercrossings are required.	Construction
Floated tracks	Where it is not possible to avoid routing tracks over localised areas of deep peat, those localised stretches of track over deep peat would be floated to avoid the requirement for excavation of peat. Floating roads would be designed to ensure suitability for site traffic during construction and operation.	Construction
Peat Management Plan (PMP)	A PMP will be produced in consultation with SEPA, THC and NatureScot. This will set out details of how any peat excavated will be stored, re-used and managed. **Appendix 9.3** provides an outline of the proposed PMP.	Construction
Water Quality Monitoring	A programme of surface water quality monitoring will be finalised post consent, prior to construction. A breakdown of the proposed monitoring methodologies has been provided to consider sensitivities of the on-site and downstream environments. The details of any required monitoring will be discussed and agreed with SEPA, and THC prior to commencement.	Pre-construction
Construction Environment Management Plan (CEMP)	The CEMP will contain a construction method statement as outlined under the Prosed Development section.	Pre-construction
Watercourse crossings	All watercourse crossings and site discharges will be regulated under the CAR licensing regime and all necessary licences will be sought from SEPA prior to the commencement of any operations on site. Detailed design will be included within a Construction Method Statement to be agreed with THC and SEPA.	Pre-construction
Drainage Strategy	Prior to construction, a detailed Drainage Strategy (DS) will be developed and agreed with SEPA and THC.	Pre-construction
Noise		
Construction Noise	A CEMP will be prepared detailing measures used to control noise from construction works, which will be submitted to THC for approval prior to commencement of construction works.	Construction
Non-wind turbine fixed plant noise	No specific mitigation is proposed, however, predicted compliance with the criterion will be confirmed during procurement of the substation and other fixed plant.	Operation
Wind turbine noise	No specific mitigation is proposed, however, at turbine procurement the sound power level of the selected model will be confirmed, and further modelling will be undertaken to confirm that the Proposed Development will meet the consented noise limits.	Operation

Environmental Subject Area	Environmental Commitment	Timing
Cultural Heritage		
Archaeological Watching Brief	The purpose of such a watching brief would be to determine the presence, character, extent and significance of any currently unknown archaeological features or artefacts that may be disturbed by ground-breaking works. The extent and location of such works would be agreed with THC Historic Environment Team.	Construction
Outline Outdoor Access Plan (oOAP)	The Outline Outdoor Access Plan (**Appendix 3.2**) proposes to consult on a new public path, Dunearn Footpath, leading to a viewpoint from which there will be a view of Lochindorb Castle from the north western side of Lochindorb. The oOAP will thus present an opportunity for people to 'enjoy, appreciate, learn from and understand Scotland's historic environment' as outlined in Historic Environment Policy for Scotland (HEPS).	Operation
Traffic and Transport		
Construction Traffic Management Plan (CTMP)	The CTMP will detail the management of traffic to and from site, including abnormal loads and daily workers commute. It shall also include mitigation for impacts to public transport, local private access and public footpaths/rights of way, cycleways and bridleways. The Contractor and/or Applicant shall amend and improve the CTMP as required throughout the construction and decommissioning period.	Pre-construction
Staff Sustainable Access Plan	A Staff Travel Plan will be deployed where necessary, to manage the arrival and departure profile of staff and to encourage sustainable modes of transport, especially car-sharing. A package of measures could include: • appointment of a Travel Plan Coordinator (TPC); • provision of public transport information; • mini-bus service for transport of site staff; • promotion of a car sharing scheme; and • car parking management.	Construction/ Operation
Abnormal Indivisible Loads (AIL) Traffic	An AIL Traffic Management Plan (TMP) will also be developed to ensure road safety for all road users during transit of development loads. The TMP will outline measures for managing the convoy and set out procedures for liaising with the emergency services to ensure that police, fire and ambulance vehicles are not impeded by the loads. This is normally undertaken by informing the emergency services of delivery times and dates and agreeing communication protocols and lay-over areas to allow overtaking.	Pre-construction

Environmental Subject Area	Environmental Commitment	Timing
Operational/Maintenance Traffic	The site entrance junction and access track will be well maintained and monitored during the operational life of the development. Regular maintenance will be undertaken to keep the site access track drainage systems fully operational and to ensure there are no run-off issues onto the public road network.	Operation
Outline Outdoor Access Plan	The Outline Outdoor Access Plan provides outline information on how public access rights would be managed during the construction and operational phases of the Proposed Development. The purpose of the oOAP is to plan site tracks and recreational paths to maintain public access routes during construction and to enhance public outdoor access in the long-term within the site and the wider landholding.	Operation
Access route	Prior to commencement, there will be confirmation of the following: • there are no roadworks or closures that could affect passage of loads; • no underground services on the route at risk; and • that the relevant Police / escort authorities are satisfied with the route being used and that the appropriate roads authorities have been further contacted.	Pre-construction
Socio-Economics, Tourism and Recreation		
No significant adverse effects associated with the Proposed Development have been identified, therefore no mitigation measures were considered necessary.		
Aviation and Radar		
Aviation – lighting	After consultation with key aviation stakeholders it was concluded that a scheme based on cardinal lighting only was suitable for this site, in the interests of reducing visible impacts but maintaining aviation safeguarding. It is proposed that Turbines 1, 3, 14, 15 and 17 will be lit This lighting scheme has been approved in principle by the CAA, who will also need to provide a final approval prior to construction.	Operation
Other Issues		
Telecommunications	It is considered that there will be no significant effects on telecommunication interests as a result of the Proposed Development	N/A
Land use	The land not required for siting of the infrastructure of the Proposed Development will be reinstated as agricultural grazing.	Pre-construction