Technical Appendix 4.3: Schedule of Mitigation



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Technical Appendix 4.3: Schedule of Mitigation

This Appendix provides a consolidated list of mitigation, good practice, enhancement and monitoring measures which have been identified through the EIA, and which will be implemented during construction, operation and decommissioning of the Proposed Development. Measures are presented on a topic-by-topic basis, reflecting the chapters of the EIA Report. Where no mitigation or monitoring measures are proposed within a chapter, or for a discrete topic being assessed within a chapter, the chapter or topic has been omitted from this Appendix. It should be noted that all design measures are considered to be 'embedded mitigation' and are assumed to be implemented and effective and have not been included in this Appendix.

Table 1 – Schedule of Mitigation

Good Practice / Embedded Mitigation	Additional Mitigation / Enhancement	Monitoring
Chapter 4: Project Description		
Construction	Construction	Construction
Construction phase impacts of the Proposed Development will be managed in line with the Construction (Design and Management) Regulations 2015 and as part of the detailed design process taking into account the adoption of good practice (including Pollution Prevention Guidelines (PPGs) and replacement Guidance for Pollution Prevention (GPPs). <u>Micrositing</u> A 100 m micrositing tolerance for turbines and all other infrastructure would be applied to the Proposed Development (so long as infrastructure does not move into the watercourse buffers or other environmental constraints identified on-site and remains within the Site boundary). Within this distance, any changes within 50-100 m of the consented locations will require approval of DGC in consultation with statutory consultees or will treated as a formal variation to the consent	Access Management Plans for temporary access management, including traffic management, would be communicated with the public prior to taking place, where feasible. The Applicant is committed to ensuring the safety of members of the general public, whilst also ensuring that construction progress is not compromised. An Outline Access Management Plan (AMP) is provided in Technical Appendix 4.5 with the final version of the AMP to be agreed with DGC in advance of construction. Operation	Monitoring will be required as part of the CEMP.
 <u>Construction Environmental Management Plan</u> Prior to the construction of the Proposed Development, the Applicant will develop a detailed Construction Environmental Management Plan (CEMP) an outline of the content of which is provided in Technical Appendix 4.2. The CEMP would be maintained and updated on site and would be updated in line with associated design specifications and Construction (Design and Management) (CDM) 2015 Regulations documentation such as the Contractor's Construction Phase Plan. Where appropriate, the CEMP, or plans within the CEMP, would form part of the site induction which would be mandatory for all employees, contractors and visitors attending the site. All employees and contractors would need to familiarise themselves with the relevant contents of the CEMP and supporting appendices as directed. The objectives of the outline CEMP is to: ensure that construction activities are carried out in a manner which minimises effects on the environment; provide a mechanism for ensuring that measures to prevent, reduce or mitigate potentially adverse environmental impacts identified in the EIA Report and this outline CEMP are implemented; 	Aviation Lighting As the turbines of the Proposed Development will exceed 150 m maximum blade height tip height, they will need to be lit in accordance with the requirements of the Civil Aviation Authority (CAA) Air Navigation Order (ANO), in addition to meeting the lighting requirements of the Ministry of Defence (MOD). It is proposed that T1, T2, T5 and T9 are provided with 2000 candela (cd) lights at hub height to satisfy the CAA-ANO requirement, with additional infra-red (IR) lighting being provided to satisfy the MOD requirements. Aviation lighting requirements is detailed further in Technical Appendix 4.6 . <u>Shadow Flicker</u> A Wind Farm Shadow Flicker Protocol would be submitted and approved by Dumfries and Galloway prior to the operation of the first turbine. This would set out the protocol to be followed should a shadow flicker complaint be received from a receptor within the study area, and would detail potential mitigation measures.	

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Good Practice / Embedded Mitigation	Additional Mitigation / Enhancement	Monitoring
 ensure that good construction practices are adopted and maintained throughout the construction of the Proposed Development; 		
- provide a framework for mitigating unexpected impacts during construction;		
 provide assurance to third parties that their requirements with respect to environmental performance will be met; 		
 provide a mechanism for ensuring compliance with environmental legislation and statutory consents; and 		
- provide a framework against which to monitor and audit environmental performance.		
The CEMP will include, but not be limited to:		
- Construction Method Statement		
- Site Waste Management Plan		
- Pollution Prevention Plan		
- Drainage Management Plan		
- Ground and Surface Water Monitoring Plan		
- Fish Monitoring Plan		
- Dust and Mud Management Plan		
- Forestry Waste Management Plan		
- Peat Management Plan		
- Species Protection Plan		
- Habitat Specific Protection Plan		
- Breeding Bird Protection Plan		
<u>Planning Monitoring Officer</u> The PMO is responsible for reviewing the Applicant's compliance with the project's planning conditions and reporting back to the Planning Authority. The PMO shall visit site on a monthly basis and prepare a monthly report. A key focus for the PMO shall be the compliance with the CEMP and protection of the environment. The PMO shall be an independent environmental specialist selected by the Planning Authority		
Ecological/Environmental Clerk of Works Prior to works commencing on site an Ecological and Environmental Clerk of Works will be appointed by the Applicant throughout the construction period as required by the Standard Conditions. The Ecological Clerk of Works is responsible for monitoring compliance with ecological and hydrological mitigation measures, while the Environmental Clerk of Works will have a duty to monitor compliance with all environmental commitments stated within the EIA Report. Both will be required to submit regular reports to the Planning Authority and report any incidences of non- compliance. Both the Ecological and Environmental Clerk of Works are required to have the relevant skills, experience and qualifications for their respective roles and will be supported by other technical experts as required (e.g. ornithologists, archaeologists, etc.).		

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Good Practice / Embedded Mitigation	Additional Mitigation / Enhancement	Monitoring
Decommissioning		
Decommissioning, Restoration and Aftercare Strategy Preparation and agreement of a Decommissioning , Restoration and Aftercare Strategy in line with current legislation, guidance, policy at that time. A financial guarantee for the decommissioning would be provided prior to the commencement of construction. Chapter 5: Landscape and Visual Amenity No further mitigation measures beyond design.		
Chapter 6: Geology, Hydrology and Peat		
Construction	Construction	Pre-construction, Operation
Construction Pollution prevention and control measures - SuDS to minimise/attenuate surface run-off from new hardstanding and tracks, reduce sedimentation and erosion and reduce pollution and accidental spillage; - pollution control measures to be put in place at watercourse crossings; - peat management measures; and - measures to reduce sedimentation, erosion, and pollution during forestry felling. As a minimum, the Contractor will be required to follow the guidance contained in SEPA Guidance for Pollution Prevention (GPPs) and to follow the SEPA's general binding rules (GBR) under the Water Environment (Controlled Activities) (Scotland) Regulations 2011, as amended (CAR Regulations) (Scottish Government, 2011). Drainage measures - appropriately sized culverts passing under the tracks that do not restrict flow and allow small watercourses, intercepted field drains and ephemeral streams/surface water flow pathways to pass under the tracks; - interceptor drainage ditches on the upgradient side of all proposed infrastructure to intercept and divert 'clean' surface water run-off draining towards the construction areas; and - installation and maintenance of swales and track drains to intercept, collect and treat run-off from access tracks and hardstanding areas of the Site and channel run-off to stilling ponds for sediment settling. Concrete batching Good practice described in SEPA wat-sg-75 guidance (SEPA, 2021) will be followed to isolate, collect, reuse and dispose of run-off from concrete operations. Concrete wash water and waste will	Construction Measures to protect surface and ground water quality and quantity Additional mitigation / SUDS (e.g. silt fences, settlement ponds) will be put in place during the construction and working at: - Watercourse crossings; - Water buffer encroachments (A – E): o Turbine 8 access track close to unnamed bog pool; o Turbine 8 hardstanding near unnamed minor watercourse; o Working areas at Turbine 6 hardstanding; o Working areas at Turbine 2 hardstanding; and o Proposed new access track on western access route. The bed and banks of watercourses and crossing locations will be re-established to their previous condition immediately after construction. Measures to protect GWDTEs The tracks leading to Turbines 1, 2 and 3 will be designed to enable subsurface flows to be maintained. Measures to protect geat Any excavated peat will be stored appropriately and re-used as soon as possible for reinstatement or restoration.	Pre-construction, Operation and Post-Construction Water Quality Monitoring Plan A detailed water quality monitoring plan will be submitted in advance of construction and implemented in full. Construction <u>GWDTE</u> Pre- and post-construction groundwater monitoring will be undertaken at the GWDTE.
be sent off-Site to a licensed facility for treatment and/or disposal, in accordance with the Duty of Care for Waste. If the water supply for concrete batching is sourced from within the Site a licence for abstraction will be obtained from SEPA post-consent, in accordance with SEPA GBR and CAR licensing. Watercourse crossings	 Mitigation of peat landslide risk may be achieved through further micro-siting and / or careful construction management and through such mitigation, landslide risks are interpreted to be negligible post-mitigation. A Peat Management Plan as outlined in Technical Appendix 6.3 will be agreed with DGC and implemented in full. 	

And Develop (Each did Mitheday)		
Good Practice / Embedded Mitigation	Additional Mitigation / Enhancement	Monitoring
General good construction practice and SEPA GBR 6 and GBR 9 will be followed for minor		
watercourses.		
Larger watercourse crossings will either require registration or a simple licence under CAR and will		
require specific mitigation measures. Bridging solutions will be designed to avoid affecting the bed		
and banks of watercourses. Fording of watercourses will be avoided Design and implementation		
and banks of watercourses. Fording of watercourses will be avoided. Design and implementation		
of clossings will follow best practice, including recommendations in SEPA (2010) Engineering in		
the water Environment Good Practice Guide - River Crossings (SEPA, 2010), Scottish		
Renewables et al. (2024) Good Practice during Windfarm Construction (Scottish Renewable et al,		
2024) and SNH (2015) Constructed tracks in the Scottish Uplands (SNH, 2015).		
During construction, temporary SuDS will be put in place at each watercourse crossing to ensure		
no sedimentation from construction works or pollution from plant or machinery can enter the		
watercourse. This could be a series of settlement ponds or settlement tanks and silt fences		
watchedurse. This could be a series of settlement points of settlement tarks and sit renees.		
Construction Site License (CSL)		
Construction of the cost of th		
A CSL will be obtained from SEPA under the CAR Regulations in advance of the construction		
works. This will include a detailed Pollution Prevention Plan (PPP) to ensure that any discharges of		
water run-off from the Site to the water environment do not cause pollution.		
Site Waste Management Plan		
Prior to construction and on completion of ground investigations and micro-siting, a site waste		
management plan shall be produced, including for site soil and peat management good practice.		
Any excavated peat will be appropriately managed and re-used		
The observation point will be appropriately managed and to doca.		
Construction Environmental Management Plan (CEMP)		
Importation of a CEMD as outlined in Technical Amendix 4.1 and above		
implementation of a CLIMF as outlined in reclinical Appendix 4.1 and above.		
Chapter 7: Ecology		
Pre-construction	Operation	Construction
	oporation	Concaración
Pre-construction surveys	Turbine Feathering	CEMP
<u>Surveys for protocology</u> and torrespiration memory including bodger, otter pine marten, red equirrel and	Eastharing by pitching the blades out of the wind to reduce	Monitoring would be
Surveys for protected tenestrial manimals including badger, otter, pine marter, red squine and	reaction around helper 2 revelutions nor minute (rem) while	
water vole will be undertaken within a defined period prior to the commencement of construction	rotation speeds below 2 revolutions per minute (rpm) while	undertaken during
covering all areas within 250 m of the Proposed Development and associated working areas,	Idling would be implemented using automated Supervisory	construction in accordance
following guidance applicable at the time of survey.	Control and Data Acquisition (SCADA) (to reduce risk to	with the CEMP (see the
	foraging and commuting bats).	OCEMP in Technical
The results of the pre-construction surveys will inform the need for further mitigation (if required) in		Appendix 4.1).
respect of sensitive working practices. Species Protection Plans (SPPs) and/or the requirement to		· · · · · ·
consult with NatureScot in relation to any protected species licensing		Operation
Construction		NEMP
Construction		Implementation and success
		implementation and success
Construction Environmental Management Plan (CEMP)		or the UNEMP (see
Implementation of a CEMP as outlined in Technical Appendix 4.1 and above.		Technical Appendix 7.5) will
		be monitored. The monitoring
		protocols would include



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Good Practice / Embedded Mitigation	Additional Mitigation / Enhancement	Monitoring
Operation Speed Limit On-site speed limit of 15 mph. Nature Enhancement Management Plan (NEMP) Development and implementation of NEMP (as outlined in Technical Appendix 7.5) Decommissioning Development of a Decommissioning, Restoration and Aftercare Strategy Development of a Decommissioning, Restoration and Aftercare Strategy through consultation with Dumfries and Galloway Council, NatureScot and other relevant consultees in line with relevant legislation and guidance at that point in time. The Strategy will detail those measures to be adopted to ensure the protection of key ecological features during decommissioning.		details of checks of the habitat mitigation (peatland compensation) and habitat enhancement measures, and details of response and remediation measures in the event mitigation/enhancement measures are found not to be performing.
Chapter 8: Ornithology		
Construction Construction Environmental Management Plan (CEMP) Implementation of a CEMP as outlined in Technical Appendix 4.1 and above. Breeding Bird Protection Plan (BBPP) A BBPP to be prepared for agreement through consultation with Dumfries and Galloway Council and NatureScot. Nature Enhancement Management Plan (NEMP) Development and implementation of NEMP (as outlined in Technical Appendix 7.5)	No additional mitigation measures are proposed	Construction <u>CEMP</u> Monitoring would be undertaken during construction in accordance with the CEMP (see Technical Appendix 4.1). Operation <u>NEMP</u> Implementation and success of the ONEMP (see Technical Appendix 7.5) will be monitored. The monitoring protocols would include details of checks of the habitat mitigation (peatland compensation) and habitat enhancement measures, and details of response and remediation measures in the
		measures are found not to be performing.
Chapter 9: Cultural Heritage		
Construction	Construction	N/A.



Good Practice / Embedded Mitigation	Additional Mitigation / Enhancement	Monitoring
Fencing	Written Scheme of Investigation	
The temporary fencing off or marking out of historic assets in proximity to the construction footprint	A Written Scheme of Investigation is to be approved by the	
to prevent accidental damage during construction.	local planning authority and will outline the appropriate	
Archanological Distance	archaeological works deemed necessary. This will comprise a	
Architecological Protocol	watching blief of advanced mitigation conducted under the	
(e.g. archaeological deposits and features) be discovered		
	Archaeological Clerk of Works (ACoW)	
Construction Environmental Management Plan (CEMP)	Appointment of an ACoW to supervise targeted ground-	
Implementation of a CEMP as outlined in Technical Appendix 4.1 and above.	breaking operations and provide onsite advice on avoidance of	
	effects (e.g. providing onsite identification and recording of	
	previously unrecorded historic assets and liaising with the local	
	authority archaeological adviser as necessary).	
Chapter 10: Noise and Vibration		
Construction	Construction	Construction
Construction Environmental Management Plan (CEMP)	During the construction phase, it is recommended that	monitoring is proposed
Implementation of a CEMP including measures to minimise noise impacts as outlined in Technical	construction activities are not undertaken in proximity to	monitoring is proposed.
Appendix 4.1 and above.	CNAL5 and CNAL6 outwith normal daytime working hours	Operation
	(Mon-Fri 07:00 – 19:00 and Saturday 07:00 – 13:00).	No operational phase
		monitoring is proposed.
<u>BS5228</u>	Operation	Compliance monitoring would
The Contractor will abide by Section 8 of BS5228 including:	Adoption of low noise modes for specific turbines and wind	be undertaken in the event of
- Keep local residents informed of the proposed working schedule, where appropriate, including	speeds to ensure that noise limits are met.	requests from the Planning
the times and duration of any abnormally noisy activity that may cause concern;		Authority.
- Ensure that any extraordinary site work continuing throughout 24 hours of a day (for example,		
crane operations lifting components onto the tower) would be programmed, when appropriate, so		
that haulage vehicles would not arrive at or leave the site between 19:00 and 07:00, with the		
exception of abnormal loads that would be scheduled to avoid peak traffic times;		
- Ensure all vehicles and mechanical plant would be fitted with effective exhaust silencers and be		
subject to programmed maintenance;		
- Select inherently quiet plant where appropriate - all major compressors would be 'sound reduced'		
models fitted with properly lined and sealed acoustic covers, which would be kept closed		
whenever the machines are in use;		
- Ensure all ancillary pneumatic percussive tools would be fitted with mufflers or silencers of the		
type recommended by the manufacturers;		
- Instruct that machines would be shut down between work periods or throttled down to a		
minimum;		
- Regularly maintain all equipment used on site, including maintenance related to noise emissions;		
- Vehicles would be loaded carefully to ensure minimal drop heights so as to minimise noise		
during this operation; and		
- Ensure all ancillary plant such as generators and pumps would be positioned so as to cause		
minimum noise disturbance and it necessary, temporary acoustic screens or enclosures should		
be provided.		

Good Practice / Embedded Mitigation	Additional Mitigation / Enhancement	Monitoring
Chapter 11: Access, Traffic and Transport		
N/A	Construction	Construction, Operation and Decommissioning
	<u>Communication</u> During the construction phase, the project website will be regularly updated and consideration will be given to communicating with local residents via text message, to provide the latest information relating to traffic movements associated with vehicles accessing the Site.	Site Entrance The Site entrance road will be maintained and monitored to ensure mud and debris from construction activities are not
	<u>Construction Traffic Management Plan CTMP)</u> The following measures will be implemented during the construction phase through the CTMP:	network. Furthermore, monitoring of the public road network will be undertaken as
	 Agree AIL route modifications and improvements with DGC and Transport Scotland. Works which will be required to facilitate turbine deliveries are outlined in Annex B of Technical Appendix 11.1. 	part of the road conditions surveys, that will likely be required as part of the planning conditions attached to the consent
	 Where possible, the detailed design process will minimise the volume of material to be imported to Site to help reduce HGV numbers. 	average average average construction
	 A Staff Travel Plan, including transport modes to and from the worksite (including pick up and drop off times). 	OAMP The OAMP is considered to
	 A Transport Management Plan for AIL deliveries. 	be a live document and will be
	 All materials delivery lorries (dry materials) will be sheeted to reduce dust and stop spillage on public roads. 	construction phase to ensure it has fully considered all the
	 Specific training and disciplinary measures will be established to ensure the highest standards are maintained 	impacts on the access baseline.
	to prevent construction vehicles from carrying mud and debris onto the carriageway.	Operation
	 Wheel cleaning facilities may be established at the Site entrance and blade transfer area, depending on the views of DGC. 	<u>Drainage Systems</u> Regular monitoring of the Site access track drainage
	 Normal Site working hours will be limited to between 07:00 and 19:00 Monday to Friday and 07:00 and 16:00 on Saturdays though component delivery and turbine erection may take place outside these hours i.e. depending on when police escort is available. 	systems to ensure they are fully operational and there are no run-off issues onto the public road network.
	 Appropriate traffic management measures will be put in place on the A713, B729 and C35S leading through to the Site, to avoid conflict with general traffic, subject to the agreement of DGC. Typical measures will include HGV turning and crossing signs and / or banksmen at the Site access and warning signs. 	



Good Practice / Embedded Mitigation	Additional Mitigation / Enhancement	Monitoring
	 Provide construction updates on the project website and via text message to residents within an agreed distance of the Site. 	
	 Adoption of a voluntary reduced speed limits, for example on the B729 and C35S and at other locations to be agreed with DGC. 	
	– All drivers will be required to attend an induction to include a toolbox talk safety briefing, the need for appropriate care and speed control, a briefing on driver speed reduction agreements (to slow Site traffic at sensitive locations through the villages), and identification of the required access routes and the controls to ensure no departure from these routes.	
	 Abnormal wear on roads agreement. 	
	 Regular road reviews will ensure debris and mud are cleared for road safety. 	
	AIL Transport Management Plan An Abnormal Load Transport Management Plan will be prepared to cater for all movements to and from the Proposed Development. This will require:	
	 emergency services to be informed of delivery times and dates, and agree on communication protocols and layover areas. 	
	 a diary of delivery movements to be maintained to avoid local events. 	
	 a protocol established with local businesses to prevent interference with deliveries and business traffic. 	
	 a construction liaison group to be formed with the Applicant, Contractor, local community, and police to manage communication and address issues. 	
	 Installation of adnace warning signs. 	
	 Information on the turbine convoys to be provided to local media. 	
	 A police escort for every convoy and a maximum of three AILs vehcicles per convoy. 	
	Staff Travel 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 flavel right coolumator (fro),	

Good Practice / Embedded Mitigation	Additional Mitigation / Enhancement	Monitoring
	 provision of public transport information; 	
	 mini-bus service for transport of Site staff; 	
	 promotion of a car sharing scheme; 	
	 – car parking management; and 	
	 restrictions on parking, for example on the public road network and verges in the vicinity of the Site entrance. 	
	Outline Access Management Plan (OAMP)	
	Implementation of an Outline Access Management Plan (AMP) as outlined in Technical Appendix 4.5 and above.	