

Technical Appendix 2.2: Schedule of Mitigation, Good Practice, Enhancement and Monitoring

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This technical appendix provides a consolidated list of all mitigation, good practice, enhancement and monitoring measures which have been identified through the Environmental Impact Assessment (EIA) process, and which will be implemented for the Proposed Development. Measures are presented on a topic-by-topic basis, reflecting the chapters or technical appendices of the EIA Report. Where no mitigation or monitoring measures are proposed within a chapter or technical appendix, that topic has been omitted from this appendix. It should also be noted that all design measures which have sought to reduce the significance of effects are considered to be 'embedded design mitigation' and have not been included in this appendix, but are detailed in each topic chapter/technical appendix, where relevant. This technical appendix relates to the Proposed Development only given that it is the focus of the planning application being made to East Ayrshire Council (EAC). All good practice measures proposed during construction of the Likely Grid Connection Route are detailed in **Chapter 4: Development Description** and other topics, where relevant.

Table 1.1: Schedule of Mitigation, Good Practice, Enhancement and Monitoring

Mitigation, Good Practice, Enhancement and Monitoring Measures.	
Chapter 4: Development Description	Good Practice Prior to the start of construction of the Proposed Development, Construction Method Statements (CMS) and a Construction Environmental Management Plan (CEMP) will be prepared, detailing measures to avoid or mitigate potential effects associated with key construction activities. The CEMP will be used to ensure that all relevant planning conditions and mitigation identified within the EIA Report to protect the environment are implemented through agreed procedures and working methods, and will be agreed with EAC, SEPA, NatureScot and other stakeholders, where appropriate. Adherence to the CEMP, as well as referenced legislation and guidance documents, will be a contractual requirement for the appointed Principal Contractor and their sub-contractors, and will be secured by a planning condition. An Outline CEMP is provided as Technical Appendix 4.2 and provides a framework from which the final CEMP will be developed by the Principal Contractor. The purpose of the CEMP will be to: ■ Provide a mechanism to ensure that construction methods avoid, minimise and control potentially adverse significant environmental effects, as identified in the EIA Report. ■ Ensure that good construction practices and all environmental legislation are adopted throughout the construction of the Proposed Development. ■ Provide a framework for responding to and mitigating unexpected effects during construction. ■ Provide assurance to third parties that agreed environmental performance criteria will be met. ■ Establish procedures for ensuring compliance with environmental legislation and statutory consents. ■ Detail the process for monitoring and auditing environmental performance. The CEMP will be updated when necessary to account for changes or updates to legislation and good practice methods throughout the construction phase. The CEMP will also be amended to incorporate information obtained during any detailed ground investigations which will be undertaken post consent and prior to construction activities. Compliance with the CEMP (including procedures, record keeping, monitoring and auditing) will be overseen by a suitably qualified and experienced Ecological Clerk of Works (ECoW).

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	The CEMP will contain the following non-exhaustive set of documents, which the Principal Contractor and their sub-contractors will be required to adhere to throughout the construction process: ■ Pollution Prevention Plan (PPP); ■ Surface Water Management Plan (SuWMP); ■ Peat Management Plan (PMP) (following the principles presented in Technical Appendix 9.3: Outline Peat Management Plan); ■ Construction Method Statements (CMS); ■ Site Waste Management Plan (SWMP); ■ Construction Traffic Management Plan (CTMP) (also comprising Staff Travel Plan and Abnormal Load Delivery Plan) (following the principles set out in the draft CTMP presented in Technical Appendix 11.1: Transport Assessment); ■ Species Protection Plan (SPP); following the draft included in Technical Appendix 7.5: Outline Species Protection Plan); ■ Water Quality and Fish Monitoring Plan; ■ Bird Protection Plan (BPP) (following the details provided in Chapter 8: Ornithology); ■ Site Restoration Plan. The CEMP will also contain the following information: ■ The name, qualifications and CV of the nominated person(s) with the responsibility for all environmental matters, for approval. ■ A completed register of contacts confirming the contact details for all key personnel for managing environmental issues, including the Applicant's representatives, the ECoW, Principal Contractor contacts and appropriate regulator contacts. ■ The construction programme and detailed working method statements. ■ A site-specific action plan, providing a register of environmental risks and outlining the requirement for accompanying site-specific mitigation, monitoring and reporting procedures. ■ Audit and inspection procedures. The Principal Contractor (PC) will be responsible for the continual development of the CEMP to take account of monitoring and audit results during the construction phase and changing environmental conditions and regulations. The services of other specialist advisers will be retained as appropriate, to be called on as required to advise on specific environmental issues. Performance against these documents will be monitored by the Applicant's Construction Project Manager and the ECoW throughout the construction period. They will ensure that the works carried out will be in accordance with the relevant legislation and best practice guidance documents.
Chapter 5: Landscape and Visual Impact Assessment	Good Practice During construction of the Proposed Development good practice construction measures such as arrangements for vegetation and soil removal, storage and replacement and the restoration of disturbed areas after construction will be detailed in and implemented through the CEMP.

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Chapter 6: Cultural Heritage	Good Practice The CEMP will identify construction best practice measures for protecting the historic environment. Measures which may be adopted include the following: ■ Implementation of a working protocol should previously unrecorded buried archaeological remains (e.g. archaeological deposits and features) be discovered. This will include the appointment of an Archaeological Clerk of Works (ACoW). The ACoW will ensure the measures for the monitoring of areas during construction, the monitoring and recording of individual assets to be undertaken in line with a Written Scheme of Investigation (WSI) agreed with West of Scotland Archaeology (WoSAS) and other relevant parties following consent. ■ The use of a CEMP, supplemented by toolbox talks as appropriate, to highlight the historic environment sensitivities of areas of the Site to those working on the Proposed Development.
Chapter 7: Ecology	Good Practice Pre-Construction and Construction To ensure good practice guidance is met, a suitably qualified ECoW will be appointed prior to the construction phase to advise the Principal Contractor (PC) and the Applicant on all ecological matters. The ECoW will be required to be present onsite during the construction phase and will carry out monitoring of works and briefings with regards to any ecological sensitivities on the Site to the relevant staff of the PC and any sub-contractors. An SPP will be implemented during the construction phase which will detail measures to adequately safeguard protected species that were either found in, or likely to be present within, the Site. The SPP includes pre-construction surveys and good practice measures during construction. Pre-construction surveys will be undertaken to check for any new protected species or features in the vicinity of the construction works in order to establish the most up-to-date baseline. The results of the pre-construction surveys will be used to update the outline SPP ahead of construction starting. The SPP will remain a live document to be updated as required and in agreement with the ECoW where changes to the distribution and status of protected species and features are recorded. Operation In line with best practice guidance on bats, the Proposed Development will utilise the method of reduced rotation speed whilst idling by feathering, at all turbines, to reduce collision risks to bats during the bat active period (April to October, inclusive). The guidance notes that, "<i>The reduction in speed resulting from feathering compared with normal idling may reduce fatality rates by up to 50%</i>". Given the known presence of high collision risk bat species onsite, this measure will be put in place from the start of the operational phase of the Proposed Development, and it does not result in any loss of output. Operational phase environmental management plans following relevant best practice and guidance will be in place during operation of the Proposed Development. These will, for example, include provisions for, but not limited to, ongoing pollution prevention control measures. Decommissioning Based on the time between construction and decommissioning, the mitigation required at decommissioning cannot be accurately identified at this stage. However, it will include (as a minimum) decommissioning surveys, adherence to the Decommissioning Environmental Management Plan (DEMP), presence of an ECoW, and adherence to a SPP. Enhancement

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In line with NPF4¹ (further detailed in Scottish Government planning guidance for biodiversity²), the Onshore Wind Policy Statement³ and the Scottish Biodiversity Strategy to 2045⁴, consideration has been given to how the Proposed Development can deliver significant enhancements to biodiversity over its lifetime. A Biodiversity Enhancement Management Plan (BEMP) for the Proposed Development will be developed to compensate for habitat loss within the Site, and further enhance habitats, thus delivering significant biodiversity enhancement.

An Outline Biodiversity Enhancement Management Plan (OBEMP) has been prepared and is provided in **Technical Appendix 7.6**. The OBEMP proposes three Habitat Management Units (HMU)(A-C) with the aim of restoring degraded habitats, enhancing habitats, and creating habitats of ecological value, which in turn will benefit existing flora and fauna as well as increase biodiversity in general. It also details the aims, objectives and management prescriptions pertaining to these three HMUs. HMU A-B proposals are shown on **Figure 1 of Technical Appendix 7.6**.

HMU A (67.86 ha) - Forest to Bog and Peatland Restoration and Enhancement

Aim - To restore and enhance blanket bog habitat within HMU A through forest-to-bog restoration the removal of non-native conifer regeneration, to promote of key peat-forming species (particularly *Sphagna*, *Ericoids* and *Eriophorum* spp) to improve peatland condition, and to maintain and increase numbers and diversity of breeding wader species.

Details - The 67.86 ha of peatland restoration and enhancement will comprise of 41.27 ha of pure forest-to-bog restoration (as discussed in **Technical Appendix 4.1**) and an additional 26.59 of existing blanket bog habitat enhancement through rewetting and increasing the water table. In accordance with NatureScot guidance⁵, these measures will create up to 53.56 ha of peatland enhancement once the compensation requirements for priority peatland habitat loss has been considered (14.30 ha).

HMU B (7.96 ha) - Native Broadleaved Woodland & Riparian Corridor Enhancement, Creation & Connectivity

Aim - To enhance and expand native broadleaved and riparian woodland habitats within HMU B, improving habitat connectivity, structural diversity and ecological resilience while providing enhanced breeding, shelter and foraging opportunities for birds, bats, small mammals and invertebrates.

Details - Native broadleaf and riparian woodland totalling 7.96 ha is proposed within the Site along forest edges and sections of the Swinzie Burn, and will generally take the form of low-density peatland edge woodland planting and establishment that will replace existing conifer plantation and in consideration of the prevailing peat depths present locally. It is anticipated that this will provide enhancement and wider biodiversity benefits to a range of species.

Confidential HMU C - Breeding Raptor and Owl Productivity

Details - Details pertaining to HMU C and ornithological interests, including associated protected species, with details regarding the area and rationale and proposed measures, is presented in a

¹ Scottish Government (2023). National Planning Framework 4. Available at:

<https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf> (Accessed: 6 March 2026).

² Scottish Government (2025). Planning Guidance: Biodiversity. Available at: <https://www.gov.scot/publications/scottish-government-planning-guidance-biodiversity/documents/> (Accessed: 6 March 2026).

³ Scottish Government (2022). Onshore Wind Policy Statement 2022. Available at: <https://www.gov.scot/publications/onshore-wind-policy-statement-2022/> (Accessed: 6 March 2026).

⁴ Scottish Government (2022). Scottish Biodiversity Strategy to 2045 - Tackling the Nature Emergency in Scotland. Available at: <https://www.gov.scot/publications/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland/documents> (Accessed: 6 March 2026).

⁵ NatureScot (2023). Advising on peatland habitats and carbon-rich soils in development management. Available at: <https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management>.

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	confidential version of Technical Appendix 7.6 within Volume 5: Confidential Documents of the EIA Report. The OBEMP will be refined and developed into a final BEMP post-consent. The final BEMP will confirm the overarching Biodiversity Enhancement Area (BEA) encompassing all habitat management proposals, and any finalised management units (i.e., the refined land parcels/areas for specific habitat management proposals) therein, where the aims, objectives and management prescriptions will apply. The final BEMP will be agreed with EAC in consultation with NatureScot prior to the commencement of construction of the Proposed Development. Monitoring Monitoring will establish whether the aims and objectives of the BEMP are being met and will inform adaptive management to ensure the aims and objectives are achieved through the life of the BEMP. Pre-construction surveys including electrofishing and macroinvertebrate surveys will be undertaken in advance of construction of the Proposed Development as well as during-construction and post-construction monitoring surveys, to ensure compliance with the CEMP. Implementation and monitoring of measures within the CEMP will be undertaken via a Water Quality and Fish Monitoring Plan (WQFMP) in line with Marine Scotland Science (MSS) guidelines⁶. Operational phase monitoring for certain habitats and species will be undertaken as part of the final BEMP; see outline proposals within Technical Appendix 7.6.
Chapter 8: Ornithology	Good Practice A Bird Protection Plan (BPP), devised in consultation with NatureScot, will be in place prior to the onset of construction activities, and will be implemented through the CEMP. The BPP will apply across the full landholding (the 'blue line' boundary shown on Figure 1.1 of Volume 3a of the EIA Report), rather than being restricted to the red-line planning boundary, to ensure that all relevant bird interests are appropriately safeguarded. The BPP will describe survey methods for the identification of sites used by protected birds, and will detail protocols for the prevention, or minimisation, of disturbance to birds as a result of activities associated with the Proposed Development. To avoid direct impacts to breeding birds during construction, removal of all vegetation will take place outside of the bird nesting season in the first instance i.e. undertaken between September and March inclusive. Where vegetation clearance cannot reasonably be scheduled outside the breeding season, an ECoW will undertake a pre-works nest check to ensure no active nests are present before works proceed. To conform with the Wildlife and Countryside Act 1981, surveys to locate nests of birds will be undertaken prior to construction during the breeding season (between April and August) as part of the BPP, which will be overseen by an ECoW. If it is judged that these activities are likely to disturb breeding attempts, then appropriate exclusion zones (NatureScot, 2022)⁷ or other protection measures will be agreed with NatureScot prior to recommencing works. The BPP will describe surveys to locate the nests or other key sites (e.g. roosts) of birds listed in Schedules 1 and 1A of the WCA, in advance of construction works progressing. In the event that an active nest or roost of a Schedule 1 or Schedule 1A species is discovered within distances given by

⁶ Scottish Government (2021). Monitoring watercourses in relation to onshore wind farm developments: generic monitoring programme. Available at: <https://www.gov.scot/publications/monitoring-watercourses-in-relation-to-onshore-wind-farm-developments-generic-monitoring-programme/> (Accessed: 24 March 2026).

⁷ NatureScot. (2022). Disturbance distances of selected Scottish bird species. Available at: <https://www.nature.scot/doc/disturbance-distances-selected-scottish-bird-species-naturescot-guidance>

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	NatureScot guidance (2022)⁷ (or within a 500 m radius for Schedule 1 species not listed), a disturbance risk assessment will be prepared under the BPP. The disturbance risk assessment will detail any measures considered necessary to safeguard the breeding attempt or roost (e.g., exclusion zones or restrictions on timing of works) and will be submitted to NatureScot before recommencing work. Enhancement A number of enhancement measures are proposed within Technical Appendix 7.6 to improve conditions for a range of bird species. This includes the creation, restoration and enhancement of breeding and foraging habitats for a range of bird species through the restoration and enhancement of peatland within HMU A. The restoration of peatland and the increase in open moorland from commercial woodland, will, over time, have benefits in terms of general biodiversity. The diversity of flora and fauna will improve, and the area is likely to become ecologically richer. Additional enhancement measures are proposed for protected ornithological interests and these are detailed in a confidential version of Technical Appendix 7.6 within Volume 5: Confidential Documents. Monitoring Post-construction ornithological monitoring will be undertaken during Years 0 to 5, when Year 0 is pre-construction and Years 1 to 5 are during operation, to confirm the effectiveness of the ornithology specific measures implemented through the BEMP, and to provide an evidence base for adaptive management if required. Monitoring will be undertaken by suitably qualified ornithologists under the direction of the Ecological Clerk of Works (ECoW) and in accordance with relevant NatureScot guidance. Monitoring will comprise: ■ Breeding Moorland Birds (Years 0 to 5) — Targeted breeding bird surveys will be undertaken annually across open ground habitats to assess the effectiveness of habitat management and mitigation measures implemented through the agreed BEMP. Surveys will follow standardised methods (Brown & Shepherd, 1993)¹⁸ to allow comparison across years and to detect any changes in species presence, abundance, or distribution attributable to the development or associated management interventions. ■ Specific monitoring for protected ornithological interests which are presented in Volume 5 of the EIA Report Findings from all monitoring will be reported annually and used to inform ongoing implementation of the BEMP. Where monitoring identifies a need for refinement of management measures, recommendations will be made to the Applicant and implemented subject to agreement with the relevant statutory bodies Following completion of the Year 0 to 5 monitoring period, the Applicant will prepare a Monitoring Review Report summarising species responses to enhancement measures and the outcomes of habitat management delivered through the BEMP. The requirement for any continued monitoring beyond Year 5 will be determined by the planning authority, in consultation with NatureScot, based on the evidence gathered and the extent to which enhancement objectives are being achieved. Where monitoring demonstrates stable or improving ecological conditions, no further surveys will be required; however, where additional information would support ongoing enhancement or adaptive management, a proportionate programme of continued monitoring may be agreed.
Chapter 9: Hydrology, Hydrogeology, Geology, and Peat	Mitigation Additional mitigation will be put in place during the construction and working at the following watercourse buffer encroachments (see Chapter 9, Technical Appendix 9.1: Watercourse Crossings and Buffer Assessment and Figure 9.2a-e):

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- E – the temporary crane pad at T1 will be micrositied to achieve a 10 m buffer from the drain. If a 10 m buffer cannot be achieved, the drain will be diverted during construction. Silt fences/additional SuDS will also be installed.
- F - The temporary floating hardstanding at T1 will be micrositied to maintain a 10 m buffer distance from the headwater channel, if possible. If this cannot be achieved, the channel will be temporarily culverted under the floating hardstanding during construction. If temporary culverting is required, the channel morphology will be restored post culverting. Additional Mitigation (e.g. silt fences/additional SuDS) will be installed between the hardstanding areas and the watercourse to reduce the risk of sediment/silt runoff during construction.
- routed away from areas of Moderate peat landslide likelihood or Factor of Safety <1.4 (using best estimate parameters).

Good Practice**Hydrology**

A number of good practice pollution prevention and control measures will be put in place during the construction phase. These reflect best practice guidance and recognised industry standards, as well as the Applicant's experience of constructing wind farms. Many of the measures mitigate several potential effects (e.g. mitigation to minimise sedimentation and pollution such as Sustainable Drainage Systems (SuDS) which can also serve to attenuate surface water run-off and minimise flood risk). These include:

- SuDS to minimise/attenuate surface run-off from new hardstanding and tracks;
- SuDS to reduce sedimentation and erosion;
- SuDS to reduce pollution and accidental spillage;
- Pollution control measures to be put in place at watercourse crossings;
- Peat management measures;
- Measures to reduce sedimentation, erosion, and pollution during forestry felling;
- Good practice construction and pollution control measures during the construction of the grid connection, including following SEPA Guidance for Pollution Prevention (GPP) publications, in particular:
 - GPP1: Understanding your environmental responsibilities – good environmental practices;
 - GPP5: Works and maintenance in or near water; and
 - GPP6: Working at construction and demolition sites.

Drainage measures for new access tracks and infrastructure include (but are not limited to):

- 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.

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Forestry felling and removal will follow the good practice guidance and legal requirements set out in Section 8 (Forests and Soil) and Section 9 (Forests and Water) of the UK Forestry Standard (Forest Research, 2023).

As a minimum, the Contractor will be required to follow the guidance contained in SEPA Guidance for Pollution Prevention (GPPs) and to follow SEPA's general binding rules (GBR) under the Environmental Authorisation (Scotland) Regulations 2018 (EASR) (Scottish Government, 2018).

Of the 12 new crossings required for the Proposed Development, ten are over minor watercourses and fall under General Binding Rule 6 (the installation of an outfall or a crossing with no part of the crossing on the bed or banks). These crossings will not require registration or a permit under SEPA EASR Regulations; however, the work will follow general good construction practice and SEPA GBR 6 and 9. Further details are provided in **Technical Appendix 9.1**.

Of the two watercourse crossings over OS-marked watercourses, watercourse crossing 1 will use a single-span bottomless culvert with no part of the crossing on the bed or banks. This type of crossing is subject to GBR 6 and 9 and does not require registration or a permit.

Due to the large flood risk area at watercourse crossing 6, a single span bridge or suitable drainage (e.g. numerous pipes) within the track is proposed. The track is proposed to be floated in this location which will allow hydrological connectivity beneath the track. No infrastructure is proposed on the bed or banks of the watercourse, which will be spanned by either a single-span bridge or bottomless culvert.

Bridging solutions will be designed to minimise effects to the bed and banks of watercourses. Fording of watercourses will be avoided. Design and implementation of crossings will follow best practice, including recommendations in Engineering in the Water Environment Good Practice Guide - River Crossings (SEPA, 2010), WAT-G-024 EASR Guidance: Engineering: Activity Guide: Crossings (SEPA, 2025), Good Practice during Windfarm Construction (Scottish Renewable et al, 2024) and Constructed tracks in the Scottish Uplands (SNH, 2015).

During construction, temporary construction 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.

A 'P-WAT-E1: The discharge of water run-off from a construction site' Permit will be obtained from SEPA under the EASR 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. This will be prepared in advance of construction and authorisation from SEPA is required before construction commences.

Prior to construction and on completion of ground investigations and micro-siting, a site waste management plan (SWMP) shall be produced, including for site soil and peat management good practice. Any excavated peat will be appropriately managed and re-used. This is detailed further in the outline PMP (**Technical Appendix 9.3**).

The detailed CEMP will be developed and agreed with EAC and SEPA in advance of works and will include:

- A Surface Water Management Plan (SuWMP), or similar, which will detail proposed surface drainage measures to treat and deal with all the surface run-off from the Site, to be designed in accordance with SuDS principles and all best practice guides and recognised industry standards.
- The approved PPP which will detail the proposed mitigation measures as identified within this EIA to address each identified pollution risk.

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- A plan to monitor and plan the timing of works to avoid construction during periods of the heaviest rainfall.
- A plan to detail emergency procedures in the event of spillages or any other breach.
- A plan to detail monitoring and inspections of watercourses. All actions will be recorded.
- A SWMP to detail proposals for managing the extraction and storage of waste.
- A Peat Management Plan (**Technical Appendix 9.3**).

Peat

Good practice measures proposed for the excavation and handling of peat include:

- A minimum thickness of 0.3 m of acrotelmic peat or turved organic soil should be excavated where sufficient soil is present; where less than 0.3m is present, the full depth of soil and surface vegetation should be excavated;
- Excavation and transport of peat/soil shall be undertaken to avoid cross-contamination between soil horizons (e.g. organic soil and underlying mineral soil / substrate);
- Where possible, cross-tracking of plant over undisturbed vegetation should be minimised, and excavated materials transported to their storage locations along constructed or existing track, or in the case of forest-to-bog areas, along suitably robust brashmats, corduroy roads, or, where necessary other suitable temporary surfaces;
- If working is required away from constructed roads / tracks, the use of long reach excavators should be encouraged in order to minimise cross-tracking;
- If landscaping of road / track margins is required for temporary works, it is preferable for vegetated shallow peaty soils or organo-mineral soils to be used for this purpose rather than acrotelmic peat (which should be stored and utilised in forest-to-bog work or reinstatement of temporary construction footprints); and
- Wherever possible, double handling of peat should be minimised (in particular for catotelmic peat) by direct transport of materials to their point of storage.

Good practice measures proposed for the storage of peat include:

- Storage should be eliminated where possible by single handling from the point of excavation to the location of reuse.
- If storage cannot be avoided, minimise storage time by taking a holistic approach to excavation and restoration such that catotelmic peat (in particular) is used as soon as possible after excavation.
- Store excavated acrotelmic and catotelmic peat separately during excavation works, which will be undertaken by an experienced contractor specialising in peat groundworks and restoration.
- Acrotelmic peat and turved soil blocks should be stored turf side up to prevent damage to vegetation.
- Storing in areas of minimal gradient where 'runoff' or drainage away from the point of storage is minimised (these areas will also satisfy to avoid areas of lower stability)

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- Fewer, larger stores will be preferable to a greater number of small stores, since the total potential area of drying surface will be less.
- Where storage is required in the medium term, preparing the peat to minimise the surface exposed to drying (e.g. through blading off of catotelmic peat and use of appropriate cover to minimise moisture loss).
- A Peat ECoW should work with an appointed Geotechnical Engineer (GE) to review the placement and condition of stored peat.
- Storage areas should be outside any area identified in the PLHRA as of 'Moderate' or greater natural likelihood (see Technical Appendix 9.4) and should be more than 50 m away from watercourses, away from sensitive habitats and away from the edge of excavations.
- Peat and soil stores should be appropriately bunded to prevent risks from material instability and prevent runoff of sediment and water from the stockpiles
- The condition of the excavated peat, in particular its moisture content, should be regularly monitored and local water utilised to periodically 'refresh' stored peat and prevent desiccation.

Good practice measures proposed for the reinstatement and restoration of peat include:

- Where possible, turves and underlying catotelmic peat should be reinstated at the locations from which they were removed.
- Any bare peat exposed at the surface of a reinstated area should be seeded with a seed mix or translocated vegetation appropriate to the locality.
- Where insufficient turves are available to fully cover reinstated soils, a checkerboard pattern of turf blocks should be used, with turf squares no less than 1 m² to act as seed points interspersed amongst the bare areas.
- Reinstated ground levels should tie in with the surrounds, and any bulking up should be avoided by tamping down soils and turves.
- If appropriate, temporary fencing may be required to enable vegetation to establish following reinstatement works and prevent damage by livestock, deer or rabbits.

In relation to peat landslide hazard and risk assessment, the following good practice measures will be implemented:

Prior to construction:

- Prior to any excavations, it is strongly recommended to undertake detailed intrusive site investigation and laboratory analysis to characterise the strength of peat soils in the relevant areas.
 - Determine the strength of free-standing bare peat excavations, and requirement for retention structures (e.g. cofferdams or equivalent).
 - Determine the strength of loaded peat (where excavators and plant are required to operate on temporary surfaces such as bog mats, or where operating directly on the bog surface).
 - Identify sub-surface water-filled voids or natural pipes delivering water to the excavation zone, e.g. through the use of ground penetrating radar or careful pre-excavation site observations.
- A comprehensive Geotechnical Risk Register should be prepared post-consent, but pre-construction, detailing sequence of working for excavations, measures to minimise peat slippage, design of retaining structures for the duration of open hole works, monitoring

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requirements in and around the excavation and remedial measures in the event of unanticipated ground movement.

- The risk register should be considered a live document and updated with site experience as infrastructure is constructed. Ideally, a contractor with experience of working in deep peat should be engaged to undertake the works.

During Construction:

- For excavations:

- Use of appropriate supporting structures around peat excavations to prevent collapse and the development of tension cracks.
- Avoid cutting trenches or aligning excavations across slopes (which may act as incipient back scars for peat failures) unless appropriate mitigation has been put in place.
- Implement methods of working that minimise the cutting of the toes of slope, e.g. working up-to-downslope during excavation works.
- Monitor the ground upslope of excavation works for creep, heave, displacement, tension cracks, subsidence or changes in surface water content, ensuring a banksman is specifically tasked with overseeing groundworks for the duration of peat excavation and for any period in which peat faces are left unsupported or unremediated.
- Monitor cut faces for changes in water discharge, particularly at the peat-substrate contact.
- Minimise the effects of construction on natural drainage by ensuring that natural drainage pathways are maintained or diverted such alteration of the hydrological regime of the site is minimised or avoided; drainage plans should avoid creating drainage/infiltration areas or settlement ponds towards the tops of slopes (where they may act to both load the slope and elevate pore pressures)

- For cut tracks:

- Maintain drainage pathways through tracks to avoid ponding of water upslope.
- Monitor the top line of excavated peat deposits for deformation post-excavation.
- Monitor the effectiveness of cross-track drainage to ensure water remains free-flowing and that no blockages have occurred.

- For floating tracks:

- Allow peat to undergo primary consolidation by adopting rates of road construction appropriate to weather conditions.
- Identify 'stop' rules, i.e. weather dependent criteria for cessation of track construction based on local meteorological data.
- Run vehicles at 50% load capacity until the tracks have entered the secondary compression phase.
- Prior to construction, setting out the centreline of the proposed track to identify any ground instability concerns or particularly wet zones.

- For storage of peat and restoration activities:

- Ensure stored peat is not located upslope of working areas or adjacent to drains or watercourses.

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- Undertake site-specific stability analysis for all areas of peat storage (if on sloping ground) to ensure the likelihood of destabilisation of underlying peat is minimised.
- Avoid storing peat on slope gradients $>3^\circ$ and preferably store on ground with neutral slopes and natural downslope barriers to peat movement.
- Monitor effects of wetting / re-wetting stored peat on surrounding peat areas, and prevent water build up on the upslope side of peat mounds.
- Undertake regular monitoring of emplaced peat in restoration areas to identify evidence of creep or pressure on retaining structures (dams and berms).
- Maximise the interval between material deliveries over newly constructed tracks that are still observed to be within the primary consolidation phase.
- In addition to the above control measures, the following should be followed:
 - The geotechnical risk register prepared prior to construction should be updated with site experience as infrastructure is constructed.
 - Awareness of peat instability and pre-failure indicators should be incorporated in site induction, training and monthly toolbox talks to enable all site personnel to recognise ground disturbances and features indicative of incipient instability.
 - A weather policy should be agreed and implemented during works, e.g. identifying 'stop' rules (i.e. weather dependent criteria) for cessation of track construction or trafficking.
 - Monitoring checklists should be prepared with respect to peat instability addressing all construction activities proposed for site.
 - An Emergency Response Plan (ERP) should be prepared to support site personnel in safely managing and mitigating the consequences of a peat instability event should it occur. The ERP should identify responsibilities for preparing for such an event and responding to it, ensure that short and medium term mitigations plans and procedures are in place and are implemented, and identify lessons learned to reduce the likelihood of subsequent occurrences once root cause has been identified.

Monitoring**Hydrology**

A detailed water quality monitoring plan will be submitted in advance of construction. Based on the effects assessment, it is recommended that water quality monitoring is carried out on the Swinzie Burn downstream of the Proposed Development during construction, as well as at selected locations downstream of new watercourse crossings and buffer encroachments. These will be defined in the CEMP and agreed with SEPA.

Peat

During construction, monitoring should be undertaken in any areas where peat is stored, as follows:

- Regular visual inspection of the outer peat surface of any stored peat to identify any evidence of drying or cracking.
- Regular coring of stored peat to log the moisture content of stored peat (using the von Post scale to monitor changes in moisture content for peat on the outside and within the peat mound).

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- Clear specification of an action plan in response to these observations, including modifications to coverings, implementation of watering, or construction of temporary berms to retain water in the storage footprint.

- Acceleration of re-use for vulnerable stores if so identified.

Key to the success of the strategy for peat management will be careful monitoring of the post-construction works and any restoration activities. A monitoring programme should be initiated once restoration and peat reinstatement works have been completed, and should include:

- Review of % vegetation cover and vegetation composition in areas of bare peat that have been reinstated or restored, or in any areas that have been seeded (due to a lack of available turved material or harvested bog mosses).
- Review of stability of deposits in their new locations by inspection and fixed point photography.
- Fixed point photography of vegetation change in order to aid review over a series of monitoring intervals. All turbine locations and all translocation areas should be subject to a detailed monitoring programme until they are well established on a trajectory of recovery.

If required, mitigation recommendations should follow from the monitoring and include:

- Specification of seeding appropriate to the target vegetation or stabilisation with geotextile if revegetation is not occurring naturally (which will assist re-wetting and retention of moisture contents).
- Construction of wood dams (or equivalent) if any creep of peat soils is evident at any restored or translocated location.
- Monitoring should be carried out for a minimum of five years after construction and reinstatement works have concluded.

Following cessation of construction activities, monitoring of any areas where peat has been disturbed should be undertaken to ensure stability within the first 12 months. Specific signs of unexpected ground disturbance include:

- Ponding on the upslope side of infrastructure.
- Changes in the character of peat drainage within a 50 m buffer strip of track or access alignments and infrastructure (e.g. upwelling within the peat surface upslope of tracks, sudden changes in drainage behaviour downslope of tracks).
- Blockage or underperformance of any site drainage system.
- Development of tension cracks, compression features, bulging or quaking bog anywhere in a 50 m corridor surrounding the site of any construction activities or site works.

This monitoring should be undertaken on a quarterly basis in the first year after construction. In the event that unanticipated ground conditions arise during construction, the frequency of these intervals should be reviewed, revised and justified accordingly. Because slope movement in peatlands typically occur following later summer convective rainfall, site surveys are likely to be best undertaken in late September, also providing an opportunity to identify bare or drying peat that might require remedial works prior to winter.

In the event that further construction activities are required, e.g. track resurfacing, further ancillary works, remedial works or cable repairs, any activity that disturbs peat directly or indirectly should be subject to the same good practice as outlined in Section 6.4 of the **Technical Appendix 9.4: Peat Landslide Hazard and Risk Assessment**.

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Chapter 10: Noise and Vibration	Good Practice Noise mitigation during the construction phase and the decommissioning phase of the Proposed Development will fall in line with best practice techniques outlined in the CEMP. Examples include: ■ Restrictions on working hours to standard working hours (07:00 to 19:00 Monday to Friday, and 07:00 to 13:00 on Saturdays), unless specifically agreed otherwise with EAC. Outside these hours, construction activities at the Proposed Development will be limited to turbine delivery and erection, maintenance, emergency works, dust suppression, and the testing of plant and equipment, unless otherwise approved in advance in writing by EAC. It is therefore expected that only the weekday day-time noise limit will be applicable, but this is dependent on the working hours required at the time of construction; ■ Maintaining good community liaison, information distribution, and treating any noise complaints fairly and expeditiously; ■ Appropriate plant selection and maintenance, including use of equipment fitted with appropriate noise control measures; ■ Considerate siting of temporary plant; ■ Positioning temporary site compounds as far as practicably possible from NSRs; ■ Switching off plant when not in use; and ■ Adherence with the CEMP. Noise during the decommissioning phase of the development will be mitigated in line the practices set out within the Decommissioning Environmental Management Plan (DEMP), and will follow the same best practice techniques as described above for the CEMP.
Chapter 11: Access, Traffic, and Transport.	Mitigation The following measures will be implemented during the construction phase through the Construction Traffic Management Plan (CTMP): ■ Agree abnormal load route modifications and improvements with Ayrshire Roads Alliance (ARA) and Transport Scotland (TS) and other relevant stakeholders. Works which will be required to facilitate turbine deliveries are outlined in the High-level Access Review, which is presented in Annex A of Technical Appendix 11.1: Transport Assessment; ■ Where possible, the detailed design process will minimise the volume of material to be imported to Site to help reduce HGV numbers; ■ A Staff Travel Plan, including transport modes to and from the worksite (including pick up and drop off times); ■ An Abnormal Indivisible Load (AIL) Transport Management Plan for AIL deliveries; ■ All materials delivery lorries (dry materials) should be sheeted to reduce dust and stop spillage on public roads; ■ Specific training and disciplinary measures should be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway; ■ Wheel cleaning facilities may be established at the Site entrance, depending on the views of TS and the local authority;

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- Normal Site working hours will be limited to between 0700 and 1900 Monday to Friday and 0700 and 1300 on Saturdays though component delivery and turbine erection may take place outside these hours i.e. depending on when police escort is available;
- Appropriate traffic management measures will be put in place on Floak Road and the A77 leading through to the Site, to avoid conflict with general traffic, subject to the agreement of ARA and ERC. Typical measures will include HGV turning and crossing signs and / or banksmen at the Site access and warning signs;
- Provide construction updates on the project website, social media feeds and a newsletter to be distributed to residents within an agreed distance of the Site;
- Adoption of voluntary reduced speed limits, for example on the Floak Road in the vicinity access junction to the existing M77 service road and at other locations to be agreed with ARA and ERC; and
- All drivers will be required to attend an induction to include:
 - A toolbox talk safety briefing;
 - The need for appropriate care and speed control (in particular along Floak Road);
 - 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.

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 Travel Plan Coordinator (TPC);
- 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.

AIL Transport Management Plan

An AIL Transport Management Plan will be prepared to cater for all movements to and from the Proposed Development Site. This will include:

- 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;
- A diary of proposed delivery movements to liaise with the communities to avoid key dates such as local events;

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- A protocol for working with local businesses to ensure the construction traffic does not interfere with deliveries or normal business traffic; and
- Proposals to establish a construction liaison group to ensure the smooth management of the project / public interface with the applicant, the construction contractors, the local community, and if appropriate, the police forming the committee. This committee would form a means of communicating and updating on forthcoming activities and dealing with any potential issues arising.

Specific AIL Mitigation

There are a number of traffic management measures that could help reduce the effect of AIL convoys:

- All AIL deliveries will be undertaken at appropriate times (to be discussed and agreed with the local authority, TS and the police) with the aim to minimise the effect on the local road network. It is likely that the abnormal load convoys will travel in the early morning periods before peak times while general construction traffic will generally avoid the morning and evening peak periods.
- The majority of potential conflicts between construction traffic and other road users will occur with abnormal load traffic. General construction traffic is not likely to come into conflict with other road users as the vehicles are smaller and road users are generally more accustomed to them.
- Potential conflicts between the abnormal loads and other road users can occur at a variety of locations and circumstances. The main potential conflicts are likely to occur:
 - On sections of single carriageway road or narrow road sections, for example on the Floak Road, Floak Farm Bridge and the A77;
 - At locations where there are significant changes in the horizontal alignment of the carriageway, requiring the loads to use the full carriageway width;
 - Where traffic turns at a road junctions, requiring other traffic to be restrained on other approach arms; and
 - In locations where high speeds of general traffic are predicted.
- Advance warning signs will be installed on the approaches to the affected road network. Information signage could be installed to help improve driver information and allow other road users to consider alternative routes or times for their journey (where such options exist).
- The location and numbers of signs will be agreed post consent and would form part of the wider traffic management proposals for the Proposed Development.
- Information on the wind turbine convoys will be provided to local media outlets such as local papers and local radio to help assist the public. Information will relate to expected vehicle movements from the port of entry through to the Site access junction. This will assist residents becoming aware of the convoy movements and may help reduce any potential conflicts.
- The Applicant will also ensure information was distributed through its communication team via the project website, local newsletters, and social media.
- A police escort will be required to facilitate the delivery of the AILs. The police escort will be further supplemented by a civilian pilot car to assist with the escort duty. It is proposed that an advance escort will warn oncoming vehicles ahead of the convoy, with one escort staying with

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	the convoy at all times. The escorts and convoy will remain in radio contact at all times where possible. ■ The abnormal loads convoys will be no more than three AILs long, or as advised by the police, to permit safe transit along the delivery route and to allow limited overtaking opportunities for following traffic where it is safe to do so. ■ The times in which the convoys will travel will need to be agreed with Police Scotland who have sole discretion on when loads can be moved. <u>Offsite Mitigation</u> ARA, ERC and TS may request that an agreement to cover the cost of abnormal wear and tear on its road network is made. Video footage of the pre-construction phase condition of the abnormal loads access route and the construction vehicles route will be recorded to provide a baseline of the condition of the road prior to any construction work commencing. This baseline will provide evidence of any change in the road condition during the construction phase. Any necessary repairs will be coordinated with ARA, ERC and TS. Any damage caused by traffic associated with the Proposed Development during the construction period, that would be hazardous to public traffic, will be repaired immediately. Damage to road infrastructure caused directly by construction traffic will be remediated, and street furniture that is removed on a temporary basis will be fully reinstated. There will be a regular road condition review, and any debris and mud will be removed from the carriageway using an onsite road sweeper to ensure road safety for all road users. Monitoring Site entrance roads will be maintained and monitored during the construction phase and operational life of the Proposed Development. With regards to the construction phase, this will be done as part of the CTMP and will involve monitoring the Site access junction and public road network in the vicinity of the Site to ensure mud and debris from construction activities are not tracked on to the road network. Furthermore, monitoring of the public road network will be undertaken as part of the road conditions surveys, that will likely be required as part of a planning condition attached to the planning permission.
Chapter 12: Climate Change	Mitigation ■ An outline CTMP is provided within Technical Appendix 11.1 and will be implemented as part of the CEMP which will ensure that traffic movements are undertaken efficiently during construction, and unnecessary journeys avoided. It is also anticipated that the CTMP will include a vehicle idling policy to ensure that vehicle engines are turned off when not in use.
Technical Appendix 4.3: Aviation Assessment	Mitigation Glasgow Prestwick Airport (GPA) PSR ■ GPA requires developers of wind turbines within line of sight of its PSR to enter into a commercial agreement to implement the required data processing changes to optimise the radar. The Applicant will enter such an agreement, with implementation of a radar mitigation scheme secured by a suitably worded planning condition should planning permission for the Proposed Development be granted. NERL PSRs ■ Mitigation for the effects of the Proposed Development on all three affected NERL radars (Lowther Hill, Cumbernauld and Glasgow Terma PSRs) is expected to take the form of the

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	application of the inherent capabilities of the Indra 3D radar installed at Lowther Hill. This has multiple electronically-steered beams in elevation, enabling the radar to differentiate between targets at different elevation angles from the radar, as well as in azimuth. Management of the lowest elevation beam or beams of the radar, where wind turbines are located, can permit aircraft to continue to be displayed by the radar while wind turbine returns are suppressed. Implementation of the radar mitigation scheme will be secured by a commercial agreement with NERL and a suitably-worded planning condition should the Proposed Development receive planning permission. Night-Time Low-Level Flying The Applicant has submitted a proposal to the CAA for a lighting scheme on the Proposed Development in which Turbines 1, 3, 4 and 5 will be fitted with 2000 candela steady red lights on the nacelles and no lights being fitted at the mid-tower level. The proposed lighting scheme has been approved by the CAA – see Annex 1 of Technical Appendix 4.3.
Technical Appendix 4.4: Shadow Flicker Assessment	Mitigation It is not considered that additional mitigation for shadow flicker effects is required based on the findings of the assessment. If shadow flicker issues arise during operation, mitigation measures can be incorporated into the operation of the wind turbines to reduce the amount of shadow flicker experienced. The Applicant is nonetheless committed to promptly investigating any complaints of shadow flicker and taking appropriate action as required.