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# 18 Schedule of Mitigation and Monitoring

## 18.1 Introduction

18.1.1 This chapter of the EIA Report provides a consolidated draft schedule of mitigation and monitoring measures proposed to prevent, reduce, or offset significant adverse effects from the proposed development.

18.1.2 The chapter is provided primarily to assist the ECU as the relevant determining authority and EIA competent authority with its obligation under Regulation 29(f) of the EIA Regulations to secure any proposed mitigation measures and monitoring arrangements relating to significant adverse effects within any development consent granted.

## 18.2 Proposed Mitigation Measures

18.2.1 As described in Chapter 3, the proposed development has been refined to reflect environmental and technical constraints identified and mitigation measures were embedded prior to finalising the design of the proposed development. This approach has minimised the potential for significant environmental impacts.

18.2.2 Table 18.1 below summarises all mitigation, monitoring and enhancement measures committed to by the Applicant during the construction, operational and decommissioning phases of the proposed development. The proposed implementation of identified mitigation measures through conditions attached to any forthcoming consent will secure their undertaking by the Applicant and ultimately provide an enforcement mechanism should this be required.

Table 18.1 Schedule of Mitigation and Monitoring

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| Chapter 3: The Proposed Development | Construction | Micro-siting<br><br>It is proposed that a 50m horizontal micro-siting tolerance of turbines and all other infrastructure would be applied to the proposed development, as long as infrastructure remains more than 50m from any watercourse. Any movements from the consented locations would be subject to approval of the Environmental Clerk of Works (ECoW).<br><br>It is anticipated that this agreed micro-siting distance would form a planning condition.<br><br>Construction Environmental Management Document (CEMD)<br><br>An Outline Construction Environmental Management Document (CEMD) is provided as Appendix 3.4. As the CEMD is a framework document that would evolve throughout the construction phase it is anticipated that the submission and approval of an updated CEMD (or CEMP) would be secured by planning condition. Specific measures recommended for inclusion in the CEMD/CEMP are set out in the outline document and below, in respect of each technical chapter.<br><br>Borrow Pits<br><br>Upon completion of extraction at the borrow pit(s), surface profile restoration would be undertaken using the stockpiled overburden materials and other suitable materials excavated onsite (including peat) subject to review by the Environmental Clerk of Works (ECoW). The proposed methods for restoration and aftercare are described in Appendix 3.4. In summary:<br><br>▪ The fill materials would be used to soften the benched profile of the excavations and provide a gentler sloping gradient than near vertical working face slope designs. The fill materials would also be used to provide a suitable gradient on the borrow pit floor to prevent ponding.<br>▪ The stripped soils, and subsoil horizons which would be stored within perimeter screening mounds would be utilised as the surface dressing layer in which to provide a suitable medium for seeding and planting as appropriate. The base of the borrow pit would reuse existing stockpiled materials/soils generated from the site excavations to create a habitat on the floor of the borrow pit, which would be a maximum of 2 m thick across the floor area and if suitable, some of these soils could be used to 'dress' shallower side slopes but not on the steeper faces.<br>The ECoW would be in place to monitor the restoration and aftercare.<br><br>Offsite Road Improvement Works |

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| | | It is proposed that the detailed final design for the bypass route at Castle Grant (Road Improvement Site A) be secured by a suitably worded planning condition. The applicant is committed to consult with all relevant stakeholders during the detailed design phase which, it is anticipated, can be stipulated in the relevant condition(s).<br><br>A Landscape Plan will be developed to ensure that the bypass can be accommodated sensitively within its immediate landscape context and preserve the setting of the listed East Lodge. Further details are provided below in Chapter 8.<br><br>The works at Dava Bridge (Road Improvement Site B) require Listed Building Consent which is being sought in tandem with the S36 process. A Method Statement (MS) has been developed for the works which is included as Appendix 3.3.<br><br><u>Temporary construction compound and laydown/assembly area</u><br><br>The temporary construction compounds would be cleared upon commissioning of the wind farm and the areas reinstated using the previously stripped soil. The ECoW would be in place to monitor restoration and aftercare. Details on restoration and aftercare would be provided as part of the CEMD/CEMP. |
| | Operation | <u>Aviation Lighting</u><br><br>A lighting design for the proposed turbines is provided as Appendix 15.2 which is currently under determination by the CAA. The proposed lighting design marks perimeter turbines (T2 T9, T17 and T18) with medium intensity 2,000 candela red lights (capable of being dimmed to 10% (200 cd) of peak intensity when the visibility as measured at the windfarm exceeds 5 km). Infra-Red lights to MOD spec. will be installed on the nacelles of other selected perimeter turbines (T1, T3, T4, T8 & T16). |
| | Decommissioning | It is proposed that a Decommissioning and Restoration Plan (DRP) be secured as a planning condition, requiring details of decommissioning process in line with relevant legislation, policy and best practise guidance at that time. |
| Chapter 6: Socioeconomics, Tourism & Recreation | Construction | <u>Access Management Plan</u><br><br>An Outline Access Management Plan (AMP) has been prepared to demonstrate how public access can be maintained, including via temporary localised diversions to the Dava Way at the intersection with site access along with safety signage and barriers. Similar measures are proposed elsewhere within the site. Effects will be temporary, intermittent and fully reversible post-construction, and any change in access will not inhibit or greatly alter the recreational or experiential value of any route and/or receptor. It is proposed that the final version of the AMP will be secured by planning condition. Opportunities for enhancement, including upgraded footpath signage within the site, are identified in the outline AMP.<br><br><u>Net Economic Benefits and Supply Chain</u> |

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| | | Indirect local benefits will arise from the construction phase, including the use of hotels, Bed and Breakfasts and other local accommodation, hire of local equipment and plant, temporary employment of local workforce and potential contracting of local subcontractors. Ourack Wind Farm LLP has stated their intention to utilise the local supply chain where possible. In doing so, the proposed development seeks to redirect benefits back into the local economy. |
| Chapter 7: Geology, Hydrogeology and Hydrogeology | Construction | <u>Peat and Peat Management</u><br><br>The extent and depth of peat at the Main Development Site has been subject to considerable investigation. Where practically possible, areas of deep peat have been avoided by the proposed design. A site-specific Peat Landslide and Hazard Risk Assessment (PLHRA) has been prepared and has informed the proposed design (see Appendix 7.1). Good construction practice and methodologies to prevent peat instability within areas that contain peat deposits are identified in the PLHRA in Appendix 7.1. These include:<br><br>▪ measures to ensure a well-maintained drainage system, to include the identification and demarcation of zones of sensitive drainage or hydrology in areas of construction;<br>▪ minimisation of 'undercutting' of peat slopes, but where this is necessary, a more detailed assessment of the area of concern would be required;<br>▪ careful micro-siting of turbine bases, crane hardstands and access track alignments to minimise effects on the prevailing surface and sub-surface hydrology;<br>▪ raising peat stability awareness for construction staff by incorporating the issue into the site induction (e.g., peat instability indicators and good practice);<br>▪ introducing a 'Peat Hazard Emergency Plan' to provide instructions for site staff in the event of a peat slide or discovery of peat instability indicators;<br>▪ developing methodologies to ensure that degradation and erosion of exposed peat deposits does not occur as the break-up of the peat top mat has significant implications for the morphology, and thus hydrology, of the peat (e.g. minimisation of off-track plant movements within areas of peat);<br>▪ developing robust drainage systems that would require minimal maintenance; and<br>▪ developing drainage systems that would not create areas of concentrated flow or cause over-, or under-saturation of peat habitats.<br><br>Notwithstanding any of the above, detailed design and construction practices would need to consider the particular ground conditions and the specific works at each location throughout the construction period. An experienced and qualified engineering geologist/geotechnical engineer would be appointed to provide advice during the setting out, micro-siting and construction phases.<br><br>A site-specific Peat Management Plan (PMP) has been prepared (see Appendix 7.2) which shows that peat disturbed can be readily re-used for restoration purposes. It is proposed that this be updated in light of further site investigations and resubmitted a part of the CEMD/CEMP process. |

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| | | Habitat creation and enhancement for bog habitats is proposed under a Habitat Management Plan (HMP). Discussed further under Chapter 13 below.<br><br><u>Groundwater Dependent Habitats</u><br><br>It has been shown that areas identified as being potentially highly or moderately groundwater dependent are likely to be sustained by incident rainfall and local surface water runoff rather than by groundwater. Accordingly, the buffers proposed in SEPAs Groundwater Dependent Terrestrial Ecosystems (GWDTE) guidance need not apply.<br><br>Measures, such as permeable access tracks and regular cross track drains, have been proposed to safeguard existing water flow paths and maintain existing water quality. It is considered therefore that the water dependent habitats identified by the National Vegetation (NVC) mapping can be sustained. This would be confirmed, in accordance with good practice, by the Ecological Clerk of Works (ECoW) at the time of the construction who would ensure existing surface water flow paths and water flushes are maintained.<br><br><u>Good Practice Measures</u><br><br>Good practice measures would be applied in relation to pollution risk and management of surface runoff rates and volumes. This would form part of the updated CEMD/CEMP. Key good practice measures to be included are set out below:<br><br>**Construction Site Licence**<br>In accordance with Controlled Activity Regulations (CAR) prior to any construction at site a Construction Site Licence application would be made to SEPA. The Construction Site Licence requires the development of a Pollution Prevention Plan (PPP), which once agreed with SEPA is adhered to on site. The principles which would be adopted in the PPP are discussed below.<br><br>▪ Prior to construction, a site-specific drainage plan would be produced. This would take into account any existing local drainage which may not be mapped and incorporate any site-specific mitigation measures identified during the assessment.<br>▪ Measures would be included in the final CEMD/CEMP for dealing with pollution/sedimentation/flood risk incidents and would be developed prior to construction. This would be adhered to should any incident occur.<br>▪ The final CEMD/CEMP would contain details on the location of spill kits, which would identify 'hotspots' where pollution may be more likely to originate from, provide details to site personnel on how to identify the source of any spill and state procedures to be adopted in the case of a spill event. A specialist spill response contractor would be identified to deal with any major environment incidents, should they occur.<br>▪ A wet weather protocol would be developed. This would detail the procedures to be adopted by all staff during periods of heavy rainfall. Tool box talks would be given to engineering/construction/supervising personnel. |

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| | | ▪ Roles would be assigned to different engineering/construction/supervising personnel and the inspection and maintenance regimes of sediment and runoff control measures would be adopted during these periods. In extreme cases, the above protocol would dictate that work on-site may have to be temporarily suspended until weather/ground conditions allow.<br><br>**Water Quality Monitoring**<br>Water quality monitoring during the construction phase would be undertaken for the surface water catchments that drain from the Main Development Site to ensure that none of the tributaries of the main channels are carrying pollutants or suspended solids. Monitoring would be carried out at a specified frequency (depending upon the construction phase) on these catchments. The private water supply risk assessment (Appendix 7.4) identifies locations to be included in a site specific monitoring plan.<br><br>Monitoring would continue throughout the construction phase and immediately post construction. Monitoring would be used to allow a rapid response to any pollution incident as well as assess the efficacy of good practice or remedial measures. Monitoring frequency would increase during the construction phase if remedial measures to improve water quality were implemented. Detailed water quality monitoring plans would be developed during detailed design. THC, MC, SEPA, Marine Scotland, FNLRT and FDSFB would be consulted on the plans and would be contained within the final CEMD/CEMP.<br><br>The performance of the good practice measures would be kept under constant review by the water monitoring programme, based on a comparison of data taken during construction with a baseline data set, sampled prior to the construction period.<br><br>**Pollution Risk**<br>Good practice measures in relation to pollution prevention would include the following:<br><br>▪ refuelling would take place at least 50m from watercourses and where possible it would not occur when there is risk that oil from a spill could directly enter the water environment.<br>▪ foul water generated on-site would be managed in accordance with best practice and be drained to a sealed tank and routinely removed from site;<br>▪ drip trays would be placed under vehicles which could potentially leak fuel/oils when parked;<br>▪ areas would be designated for washout of vehicles which are a minimum distance of 50m from a watercourse;<br>▪ washout water would also be stored in the washout area before being treated and disposed of;<br>▪ if any water is contaminated with silt or chemicals, run-off would not enter a watercourse directly or indirectly without treatment;<br>▪ water would be prevented as far as possible, from entering excavations;<br>▪ procedures would be adhered to for storage of fuels and other potentially contaminative materials in line with the CAR to minimise the potential for accidental spillage; and<br>▪ a plan for dealing with spillage incidents would be designed prior to construction, and this would be adhered to should any incident occur, reducing the effect as far as practicable. This would be included in the final CEMD/CEMP. |

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| | | Site investigation (e.g., trial pitting and/or boreholes) would be undertaken prior to any construction works where excavation would be required to establish the wind farm and it would inform detailed design and construction methods to ensure pollution risk is further considered prior to construction. These methods would be specified in the final CEMD/CEMP.<br><br>**Erosion and Sedimentation**<br>Good practice measures for the management of erosion and sedimentation would include the following:<br>▪ all stockpiled materials would be located out with a 50m buffer from watercourses, including on up gradient sides of tracks and battered to limit instability and erosion;<br>▪ stockpiled material would either be seeded or appropriately covered, minimising the area of exposed bare ground;<br>▪ monitoring of stockpiles/excavation areas during rainfall events;<br>▪ water would be prevented as far as possible, from entering excavations through the use of appropriate cut-off drainage;<br>▪ where this is not possible, water that enters excavations would pass through a number of settlement lagoons and silt/sediment traps to remove silt prior to discharge into the surrounding drainage system. Detailed assessment of ground conditions would be required to identify locations where settlement lagoons would be feasible;<br>▪ clean and dirty water on-site would be separated, and dirty water would be filtered before entering the stream network;<br>▪ if the material is stockpiled on a slope, silt fences would be located at the toe of the slope to reduce sediment transport;<br>▪ the amount of ground exposed, and time period during which it is exposed, would be kept to a minimum and appropriate drainage would be in place to prevent surface water entering deep excavations;<br>▪ a design of drainage systems and associated measures to minimise sedimentation into natural watercourses would be developed - this may include silt traps, check dams and/or diffuse drainage;<br>▪ silt/sediment traps, single size aggregate, geotextiles or straw bales would be used to filter any coarse material and prevent increased levels of sediment. Further to this, activities involving the movement or use of fine sediment would avoid periods of heavy rainfall where possible; and<br>▪ construction personnel and the Principal Contractor would carry out regular visual inspections of watercourses to check for suspended solids.<br><br>**Fluvial Flood Risk**<br>Sustainable Drainage Systems (SuDs) would be used at the Main Development Site. Good practice in relation to the management of surface water run-off rates and volumes and potential for localised fluvial flood risk would include the following:<br><br>▪ drainage systems would be designed to ensure that any sediment, pollutants, or foreign materials which may cause blockages are removed before water is discharged into a watercourse;<br>▪ on-site drainage would be subject to routine checks to ensure that there is no build-up of sediment or foreign materials which may reduce the efficiency of the original drainage design causing localised flooding;<br>▪ appropriate drainage would attenuate runoff rates and reduce runoff volumes to ensure minimal effect upon flood risk;<br>▪ where necessary, check dams would be used within cable trenches in order to prevent trenches developing into preferential flow pathways and trenches shall be backfilled with retained excavated material; and |

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| | | ▪ as per good practice for pollution and sediment management, prior to construction, section specific drainage plans would be developed, and construction personnel made familiar with the implementation of these.<br><br>Further information on ground conditions and drainage designs would be provided in the final CEMD/CEMP.<br><br>**Water Abstractions**<br>Any water abstraction would only be made with prior authorisation from SEPA and in accordance with the CAR Licence process. Good practice that would be followed in addition to the CAR Licence regulations includes:<br>▪ water use would be planned so as to minimise abstraction volumes;<br>▪ water would be re-used where possible; and<br>▪ abstraction volumes would be recorded.<br><br>**Watercourse Crossings**<br>Five new watercourse crossings are required as detailed within Appendix 7.3. The crossings would be designed to pass the 200-yr flood event and detailed design details would be agreed with THC and SEPA as part of the final CEMD/CEMP, or by way of a separate condition. |
| | Decommissioning | Many of the measures outlined above would be applicable to the decommissioning of the proposed development. It is anticipated that details would be provided as part of a wider Decommissioning and Restoration Plan (DRP) and/or CEMD/CEMP. |
| Chapter 8: Landscape and Visual Amenity | Construction | Specific landscape mitigation which has been embedded into the design of the proposed development includes the following measures:<br><br>• The outline CEMD includes measures to restrict construction traffic to designated routes to avoid the creation of wheel ruts and ensure these are cleared-up. There would be regular litter sweeps to ensure the removal of all litter arising from the construction activities.<br>• Removal, reinstatement, and clear up of the temporary construction compounds / laydown areas and any related construction arisings.<br>• Where proposed access follows existing tracks and provides upgrades, the route design and construction methods would allow for grubbing up / reinstatement of parts of the existing tracks that deviate from the new line to avoid the creation of 'dual tracks' and / or redundant tracks, unless these can be incorporated into plans for passing places etc.<br>• On completion of site construction, the site entrance and access tracks would be cleared of any construction signage and left in a tidy and co-ordinated condition with verges restored and field boundary fencing neatly tied into new gates / access details.<br><br><u>Temporary Construction Compound and Laydown Area</u> |

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| | | A secondary laydown area is located further to the east along the site across road and the location would benefit from some partial screening from properties at Dava, the Dava Way and the A939 Highland Tourist Route. This would be provided by soil storage stockpiles and micro-siting.<br><br>The site compound and laydown areas would be fully re-instated with stored turfs or excavated soil and / or re-seeded to match the local contours and the existing vegetation and accord with the Habitat Management Plan (HMP).<br><br><u>Upgraded Site Access off the A940</u><br><br>Construction of the upgraded site access off the A940 would require the removal of 54 Scots pine and 24 lodgepole pine. Compensatory planting proposals are set out within an outline HMP. The proposed planting would be integrated with the reinstatement of Borrow Pit 1 and connect to existing trees at Aittendow.<br><br>There is an opportunity to enhance the existing and upgraded site access junction through co-ordinated signage / wind farm entrance design, including timber style bin shelters for residents, to be provided at the detailed design stage.<br><br><u>Off-Site Road Improvement Works to Facilitate Abnormal Loads</u><br><br>In order to facilitate the delivery of abnormal loads to site, offsite road improvements are required along the A939 at Castle Grant (Road Improvement Site A) and Dava Bridge (Road Improvement Site B). These two sites are illustrated in Figure 2.1 and assessed separately in Appendix 8.5.<br><br>For the proposed bypass route at Road Improvement Site A (Castle Grant), a Landscape Plan will be developed during the detailed design phase to ensure that the bypass can be accommodated sensitively within its immediate landscape context and preserve the setting of the listed East Lodge at Castle Grant. The Landscape Plan would entail the following mitigation and enhancement measures which are likely to be developed further through consultation and detailed design:<br><br>• Measures to protect key landscape features (i.e. tree protection to accord with BS 5837) and to minimise construction effects through careful siting and reinstatement.<br>• Design of landscape earthworks to tie permanent works into the existing topography, particularly in relation to the cutting through the embankment and the route of the Dava Way. Detailed design options should examine art / architectural solutions such as a hinged footbridge / low walkway or 'infill' section using stone gabions that could be lifted out to reopen the route as required.<br>• Attention would be paid to the design, integration and appearance of reinstated field boundary fencing / gates / recreational access and roadside verges. Detailed design options should examine up-grading of the field / road boundary with traditional, black estate style fencing and gates (from field corner to field corner) and enhanced verge creation and approach to the railway bridge / lodge within this part of the Castle Grant GDL. (It should be noted that the boundary of the GDL extends across the A939 to the Dava Way and former railway embankment in this area). |

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| | | • The design of landscape reinstatement and enhancement should include the re-establishment of grassland areas and verges, field boundaries (fencing and gates), path surfacing, native tree / shrub planting and the provision of road / recreational signage.<br>• The landscape design should include the provision of 'added value' through enhanced landscape quality, recreational access and footpath signage / waymarking.<br>• The design proposals would ensure the swift re-opening, ease of access and subsequent reinstatement of the enhanced landscape quality and recreational access.<br><br>The works required at Road Improvement Site B (Dava Bridge) would be temporary and involve the partial lowering of the bridge parapet walls (removal of cope stones only) and their reinstatement following completion of the construction phase. The works provide the opportunity to enhance the character of the bridge through the replacement of cement mortar with an appropriate lime mortar. A method statement (see Appendix 3.3) has been prepared to support Listed Building Consent (LBC) for the works from Highland Council in tandem with the S36 application process. No further mitigation is considered necessary.<br><br><u>Borrow Pits</u><br><br>Three borrow search areas (BP1-3) have been identified, as described in Chapter 3 and illustrated in Figure 3.1. It is most likely that BP1 would be developed to provide the majority of the rock required for the proposed development and an indicative layout of BP1 is provided in the Borrow Pit Appraisal Report as Appendix 3.4, Figure 06. The remaining rock requirement would be sourced from excavations at either or both BP2 and BP3, and / or by the import of rock from off site. The assessment has allowed for the development of BP1 and, as a worst-case, the development of both BP2 and BP3.<br><br>Upon completion, the borrow pit would be restored and a detailed reinstatement plan and programme developed, drawing upon the advice of a landscape architect and an ECoW implemented in agreement with THC, SEPA and NS. This will ensure that proposed reinstatement materials and techniques are suitable and may identify appropriate environmental enhancement opportunities. It is anticipated that steep faces would be backfilled and/ or re-profiled to match the surrounding topography, and disturbed surfaces would be covered with soil and re-seeded / re-turfed or left as exposed rock outcrops. The proposed compensatory planting would also be integrated with the reinstatement plans of Borrow Pit 1 and connected to existing trees at Aittendow.<br><br><u>Wind Turbines and Anemometer Mast</u><br><br>The turbines would be a uniform pale grey colour (no company logos or advertising) with a semi-matt finish to reduce their contrast with the background sky and landscape and minimise their reflectivity. This measure would also ensure a reasonable degree of parity between the proposed turbines and other existing, nearby turbines. |

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| | | The proposed turbines would all rotate in the same direction and at a slow and predictable speed of approximately 6 to 20 revolutions per minute. Subject to turbine selection, the transformers would be housed internally within the turbine towers, which reduces clutter and creates a simpler site image.<br><br>In the event that external transformers are required these would be located in small kiosks (approximately 4m x 4m x 3m) which would each be colour-coordinated with the substation building and associated PCS and battery containers to have a low contrast with the surrounding landscape and best match the existing moorland colours.<br><br>One anemometer mast, 112m high is proposed. It would have a lattice style construction which has a low visual impact.<br><br><u>Substation and Battery Energy Storage Compounds</u><br><br>The substation is illustrated indicatively in Figure 3.14 and would be a single storey, pitched roofed building with switchgear infrastructure and car parking.<br><br>The Battery Energy Storage Compound is illustrated in Figure 3.15 and would contain the equivalent of up to ten ISO shipping containers (approximately 12.2m x 2.4) housing batteries. Invertors, transformers and auxiliary panels would be located externally, adjacent to each battery storage container.<br><br>These compounds have been located together, low down in the wind farm site to reduce their visibility from surrounding areas. In addition, and maintain the amenity and simplicity of the uplands, the colour of the substation building, and associated equipment and battery containers would be colour co-ordinated to have a low contrast with the surrounding landscape. An example of the colour scheme is illustrated in Viewpoint 3 (Figure 8.22a-e) and Viewpoint 8 (Figure 8.27a-e). The compounds would also be enclosed by a 2.4m high perimeter fence with a low visibility style and colour. |
| | Operation | All of the mitigation related to landscape, visual and cumulative effects is ‘built-in’ or embedded into the design of the proposed development with the exception of detailed reinstatement proposals for the borrow pits, the HMP, selection of a colour scheme for the substation and battery compound and a Landscape Plan for the off-site road improvements which would be subject to planning condition.<br><br><u>Design Strategy</u><br><br>The Design Strategy for the proposed development has evolved from iterative design and assessment process that was guided by the 2020 Landscape Design Review. This led to a reduction in the scale of the development to 18 turbines at <180m blade tip height (‘the 2020 layout’) which was then refined in response to other environmental and technical constraints to create the proposed development. |

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| | | Key considerations from the 2020 Landscape Design Review included protection of the Cairngorms National Park and preserving the integrity and overall SLQs of the Drynachan, Lochindorb and Dava Moors SLA. In respect of the Cairngorms National Park, the review sought to minimising visibility of turbines from within the Cairngorms National Park by clustering turbines in an area contained by surrounding topography at the north-eastern corner of the site. In respect of the Drynachan, Lochindorb and Dava Moors SLA the review sought to preserve the integrity of the SLA by limiting turbines to land, east of the Via Regia heritage path and close to the northern SLA boundary, and by minimising visibility from Lochindorb at the heart of the SLA to the west. As a result, the proposed development has been designed to reduce the landscape, visual and cumulative effects and to reflect the landscape characteristics and SLQs of the site location within the Drynachan, Lochindorb and Dava Moors SLA. Consideration has also been given to the appropriate scale, form, pattern and construction materials, as well as the potential cumulative effect of other wind farm developments.<br><br>A Lighting Strategy (Option 2) for the aviation warning lights has been provided and assessed in Appendix 8.3 alongside the unmitigated scheme.<br><br>The operation of the proposed development would cover a period of 35 years and includes site management to ensure the adequate maintenance of site facilities and landscape features, such as access tracks, field boundaries, gates, and signage.<br><br>No further mitigation and enhancement measures are proposed beyond those commitments made and embedded into the proposed development as described in Chapter 3 and Section 8.8 of Chapter 8. |
| Chapter 9: Cultural Heritage and Archaeology | Construction | A professionally qualified Archaeological Contractor would be appointed to act as an Archaeological Clerk of Works (ACoW) for the duration of the construction phase. The ACoW will advise on all archaeological mitigation measures and ensure compliance with planning conditions. The activities of the ACoW would be carried out according to the scope of work and terms specified under the Written Scheme of Investigation (WSI) approved by Highland Council Historic Environment Team (HET).<br><br>All mitigation works presented below would take place prior to, or, where appropriate, during, the construction and / or decommissioning phase. The scope of works would be detailed in one or more Written Scheme(s) of Investigation (WSI) developed in consultation with (and subject to the agreement of) THC HET, acting on behalf of the Council. It is anticipated that the requirement for a WSI will be stipulated in a planning condition attached to any consent.<br><br><u>Walkover Survey</u><br><br>Additional walkover survey would be undertaken to heritage assets (8b-d, 19a-c and 20) which lie close to or within proposed Habitat Management Plan (HMP) areas as it was constituted at the time of the field survey.<br><br>The objectives of the field survey would be to provide information on the cultural heritage assets recorded from desk-based assessment, to determine whether or not there are other assets within the HMP areas, to record the current baseline condition of these assets, and to confirm mitigation measures to mitigate any predicted significant adverse effects on these assets that |

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| | | may arise from the proposed HMP. It is likely that mitigation can be achieved through preservation in-situ for most of those identified by the desk-based assessment and the subsequent survey.<br><br>Preservation in Situ<br><br>Five heritage assets, (Asset 8 - elements 8b, 8c, 8e & 8j, Asset 15a-b, Asset 7 - elements 7c, 7e, 7h & 7f, Asset 17 and Asset 18), along the proposed main site access track route, have been identified as lying close to an existing estate track that would require upgrading and/or widening. These are all heritage assets of low sensitivity but add value to the local historic landscape. These assets would be marked out for avoidance during the construction phase.<br><br>In addition, where the main site access track route crosses a prehistoric cairnfield (9a), a heritage asset of medium sensitivity, those clearance cairns that have been identified lying close to the access track route (within 10 m) will be marked out for avoidance during the construction phase.<br><br>If any heritage assets that warrant preservation in-situ are discovered through the further walk-over survey these will be marked out for avoidance during the HMP development phase.<br><br>Each of these heritage assets would be identified by placing high visibility markers 5m from the outer limit of the visible remains, facing the working area. Any required micro-siting of the access track would subsequently be managed to avoid the visible remains and the demarcated areas. The markers would be left in place for the duration of the construction phase and removed on completion of the Proposed Development. Assets for marking out would be identified on the ground by a qualified archaeologist or ACoW using the baseline information provided in Volume 3, Appendix 9.1. Marking out of the assets would be undertaken by the appointed main contractor, who will also be responsible for removing the markers upon completion.<br><br>Where the main site access track crosses the remains of field system (field bank remains - 7a, 8a, 9b and 9d), disturbance to the banks would be kept to the minimum necessary. This would ensure that most of the remains of these minor historic features would be retained intact.<br><br>There is no requirement for any measures to ensure preservation in situ of any of the other identified heritage assets within the Main Development Site.<br><br>Archaeological Investigations and Recording<br><br>One heritage asset (Cairnfield 9a) has been identified that will be directly affected by construction of the main site access track; effects that warrant offsetting by archaeological investigation and recording.<br><br>▪ Cairnfield (9a): any of the small cairns that cannot be avoided by construction of the main site access track would be excavated to a strategy and standard acceptable to THC HER. This may require full excavation of individual cairns, or a |

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| | | sample selection of them. The purpose of the investigation would be to investigate and record the character and method of construction of the cairns and to recover any material that may help to date the field system.<br><br>Investigations and recording of these features would result in the acquisition of archaeological knowledge and result in preservation by record, thereby offsetting the predicted effects and reducing the significance of the predicted adverse impacts.<br><br><u>Watching Briefs</u><br><br>The Applicant would seek to agree the scope of the archaeological watching brief with THC HET in advance of development works. The scope of the agreed works would be confirmed in a WSI to be signed-off prior to the commencement of the construction works, including enabling works, which is anticipated to form a condition attached to any consent.<br><br>Taking account of the avoidance through the design, and the character of identified cultural heritage baseline, it is proposed that watching briefs would be carried out at the following locations:<br><br>▪ Old Road (6): where the main site access track would cross the route of the former road (6). The purpose of the watching brief here would be to identify and record any surviving evidence of the character of the road and recover any artefacts that may be encountered.<br>▪ Farmstead (7): where the main site access track would intersect with the edges of a field system (7a) and pass close to the main elements of the farmstead (7c-f and 7h). The purpose of the watching brief here would be to record the character of the field banks forming part of the field system (7a) that may be damaged or removed by construction of the main site access track and recover of any artefactual evidence that may be present, or any underlying surviving buried remains associated with the main farmstead structures.<br>▪ Farmstead (8) and cairn (17): where the main site access track would cross the edge of a field system (8a) and pass close to the cairn (17) and the remains of a former farmstead (8e, 8f and 8j). The purpose of the watching brief here would be to record the character of the field banks forming part of (8a) that may be damaged or removed by construction of the main site access track and recover any artefactual evidence that may be present, or any underlying archaeological features associated with the former farmstead.<br>▪ Cairnfield (9a) and field banks (9b and 9d): where the main site access track would cross a possible prehistoric cairnfield and cut through the remains of two field banks. The purpose of the watching brief here would be to record the character of the field banks and recover any artefactual evidence that may be present or identify and record any underlying archaeological features of earlier date that may be encountered.<br>▪ Clearance cairns (15a-b, 16 and 18): where the main site access track would pass close to the clearance cairns. The purpose of the watching brief here would be to record any potential additional cairns that may survive as low-relief or buried remains, and any surviving associated buried remains.<br>▪ Former Railway Line (19): where the proposed bypass (at Site Improvement Site B) would cut through a short section of the former railway embankment. The purpose of the watching brief would be to record the structure of the embankment (photographic record and brief written description). |

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| | | Based on the results of the desk-based study and the field survey, there are no other specific areas where construction works are expected to encounter buried archaeological remains. It has though, been assessed that there is a low to moderate potential for hitherto undiscovered archaeological remains to be present within the Main Development Site and it may be that the Council will require archaeological monitoring in areas other than those identified above. Therefore, if required under the terms of a condition of consent, the scope of any other required archaeological watching brief(s) will be agreed through consultation with THC HET in advance of development works commencing and will be set out in the WSI.<br><br><u>Post-excavation Assessment and Reporting</u><br><br>If new, archaeologically significant discoveries are made during archaeological monitoring, and it is not possible to preserve the discovered remains in situ, provision will be made for the excavation where necessary, of any archaeological deposits encountered. The provision will include the consequent production of written reports on the findings, with post-excavation analysis and publication of the results of the works, where appropriate.<br><br><u>Listed Building Consent</u><br><br>Listed Building Consent (LBC) will be required from THC where modification of the fabric of the Category C Listed Dava Bridge (LB 349) (at Site Improvement Site A) is required to facilitate its use for off-site access.<br><br>It will also be necessary to undertake some archaeological recording and monitoring of the dismantlement of the bridge parapets (removal of the existing cope stones) and their reinstatement. The scope and details of the required mitigation will be agreed through consultation with THC HET in advance of development works commencing and will be set out in the WSI. The mitigation is likely to require the following tasks:<br><br>▪ historic building recording of the current fabric and character of the bridge, by photography and written records, including detailed elevations of the bridge parapets<br>▪ careful dismantlement under archaeological supervision of the cope stones and the retention of the stone in a manner that allows the original construction to be replaced upon reinstatement.<br>▪ reinstatement of the copes stones using the original stone in as close to their original arrangement as is possible using traditional mortaring techniques and materials.<br>▪ any new stonework required should be carried out using materials as close to the original stone as is possible and using traditional mortaring techniques.<br><br><u>Monitoring</u><br><br>Post-construction monitoring would be carried out to: |

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| | | ▪ check that marking out of heritage assets within the Main Development Site has been effective and that none of the heritage assets have been disturbed during construction works;<br>▪ check that all markers have been removed from heritage assets following completion of the Proposed Development; and<br>▪ check that the parapet walls for Dava Bridge (LB 394) have been reinstated to the required standard and in accordance with the Listed Building Consent. The fabric and character of the reinstated parapet walls would be recorded by photographic and written record. |
| | Operation | If any works are required that involve modification to the Category C Listed Dava Bridge (LB 349) during the operational phase, the same mitigation requirements as for the construction phase will apply. |
| | Decommissioning | If any works are required that involve modification to the Category C Listed Dava Bridge (LB 349) during the decommissioning phase, the same mitigation requirements as for the construction phase will apply. |
| Chapter 10: Access, Traffic and Transport | Construction | <u>Construction Traffic Management Plan</u><br><br>A Construction Traffic Management Plan (CTMP) would be provided to consider the operation and management of all construction traffic to ensure the safe and efficient transportation of the turbine components and other materials to the site during the construction phase. It is anticipated that the requirement to provide a CTMP would be secured via a planning condition. The CTMP will form an appendix to the final CEMD/CEMP.<br><br>The following measures are proposed to be included in the CTMP:<br><br>▪ The CTMP/CEMP would confirm the operational hours for the site during the construction phase. All HGV deliveries would be timed to occur within these times, although some additional limitations may be identified within the CTMP, if required. The majority of staff are anticipated to arrive and depart the site in the preceding and following hour before and after the operational times, respectively. However, some staff are expected to arrive throughout the day as required.<br>▪ An outline construction programme and indication of anticipated traffic is provided, as detailed in Chapter 3 and Appendix 10.4. The CTMP would provide updated information on the construction schedule, key construction activities, and expected traffic volumes as details are understood. Primarily this would include the confirmed locations of source materials such as local quarries and expected key milestones.<br>▪ The CTMP would also detail the agreed turbine delivery route (shown on Appendix 10.1) and the delivery routes for general HGV traffic (shown on Appendix 10.2). Other strategies will also be considered for inclusion in the CTMP, in liaison with THC, such as the use of vehicle identification system and a method of public reporting of routing infringements.<br>▪ Information on the temporary signage strategy for the delivery route would be presented in the CTMP along with details of temporary advance warning signage at crossing points and the site access junction. The CTMP would also set out a number of road safety measures including use of wheel washers and load netting to reduce the impact of mud, dirt and general detritus deposits on the road. |

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| | | ▪ Details of the number of personnel expected onsite would be set out within the CTMP following confirmation with the appointed contractors. Details would include the staff parking arrangements and any strategies for promoting car sharing.<br>▪ If works require temporary road closures, suitable diversion routes would be agreed with the relevant road authority and information would be provided to the public and emergency services to minimise any safety risk and potential delay.<br>▪ It is proposed that abnormal load deliveries would be carried out during daylight hours, for safety reasons, and outside of typical peak hours to minimise disruption and delay on the local and wider road network. Once vehicle details are known, the haulier would provide load specifications to each affected road authority so that the suitability of the structures along the route can be re-confirmed, prior to undertaking any deliveries.<br>▪ It is proposed that the local community be updated on the haulage delivery schedule so that people have the opportunity to plan journeys with advanced knowledge. This would help to reduce potential for disruption, specifically on minor roads.<br>▪ It is proposed that information be disseminated via posting information on a website and the possible use of variable message signs. Furthermore, a channel of communication would be made available, most likely by 24 hour phone number, where specific issues and emergencies can be brought to the attention of the project team. It is envisaged that this can also be used to highlight any particular maintenance issues as they arise.<br>▪ All vehicles arriving onsite would be expected to travel in a courteous and respectful manner. The public would be able to report cases of dangerous driving or routeing infringements to the site operator using email or 24 hour emergency contact details to be provided by the Principal Contractor.<br><br><u>Road Condition Survey</u><br><br>The CTMP would include details of the route condition survey undertaken along the delivery route to the site entrance. Where required, the applicant will enter into an agreement under Section 96 of the Roads (Scotland) Act 1984 “Extraordinary expenses in repairing roads damaged by heavy vehicles etc.” with each affected road authority. Given the anticipated volume of development generated traffic, road condition surveys are only proposed for the local roads, as the anticipated traffic increases are low in comparison to baseline flows on the strategic road network. The extent of condition surveys will be agreed with THC and MC, prior to construction activities commencing.<br><br>A review of the before and after condition of the carriageway would be undertaken in order to ascertain any damage caused by the construction traffic. It is proposed that a video survey is undertaken, supplemented by inspections as required, prior to the commencement of any works and again upon their completion. This would allow all parties to agree the scope of any issues related directly to the site’s construction activities. Given the prolonged period of the construction phase, it is acknowledged that some interim works may be required. The details of these works would be confirmed as issues occur.<br><br>It is accepted that the responsibility for any maintenance requirements identified and shown to be as a direct result of site construction traffic, should lie with the applicant. General road maintenance and all maintenance post-construction would remain the responsibility of the relevant road authority.<br><br><u>Abnormal Loads</u> |

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| | | The movement of abnormal load convoys will be timed to pass through Grantown-on-Spey avoiding peak times. This measure would also ensure deliveries occur during times when pedestrian activity is lower.<br><br>All abnormal load deliveries would be undertaken using Police escort vehicles to control other road users where abnormal loads are required to use the whole carriageway to complete a manoeuvre or where a narrow section of the route requires single file running.<br><br>The mitigation works proposed on the turbine delivery route ensure that the largest vehicles are able to negotiate the various junctions and other constraints safely and without undue delay. Street furniture would be temporarily removed to enable the vehicles to over sail the verges and footways as required. A trial run will be undertaken to re-confirm the suitability of the route prior to the delivery of any wind turbine components.<br><br>The haulier would provide load specifications to each affected road authority so that the suitability of the structures along the route can be re-confirmed, prior to undertaking any deliveries. Furthermore, and as outlined above, a road condition survey would be undertaken prior to deliveries starting and again once deliveries have been completed to identify any damage to the carriageway which is as a result on the movement of the abnormal loads. It is agreed that any damage is made good at the developer's cost.<br><br><u>HGVs</u><br><br>The CTMP, prepared in agreement with each road authority, would include a package of measures to ensure that HGV traffic does not cause undue disruption to other road users. This will include routeing agreements and confirmation of times of operation and delivery schedules.<br><br><u>Monitoring</u><br><br>Proposed monitoring related to the TMP are as follows:<br><br>▪ Ongoing monitoring to ensure the delivery of the CTMP is fit for purpose. Details of the origin of source materials would be included within the final TMP, along with revised details of traffic generation forecasts, as these elements are confirmed.<br>▪ Ongoing monitoring of any public feedback of dangerous driving, or routeing infringements should be carried out on a regular basis in liaison with THC and MC. Any incidents should be followed up by the Principal Contractor.<br>▪ Given the extent of the construction period, ongoing monitoring of the road condition should be undertaken by the Principal Contractor. Any steps required to mitigate issues should be taken, in liaison with the relevant road authority. |
| Chapter 11: Air Quality | Construction | <u>Dust Management Plan</u> |

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| | | Standard mitigation measures from the Institute of Air Quality Management (IAQM) guidance (2014) will be implemented at the Site during construction. A Dust Management Plan will be provided as an Appendix to the final CEMD/CEMP, inclusive of the measures below:<br><br>**Communication**<br>▪ Display the name and contact details of persons accountable on the Site boundary.<br>▪ Display the head or regional office information on the Site boundary.<br><br>**Management**<br>▪ Develop and implement a dust management plan.<br>▪ Record all dust and air quality complaints, identify causes and take measures to reduce emissions.<br>▪ Record exceptional incidents and action taken to resolve the situation.<br>▪ Carry out regular site inspections to monitor compliance with the dust management plan and record results.<br>▪ Increase site inspection frequency during prolonged dry or windy conditions and when activities with high dust potential are being undertaken.<br>▪ Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible.<br>▪ Erect solid screens or barriers around dusty activities or the Site boundary at least as high as any stockpile on-site.<br>▪ Fully enclose site or specific operations where there is a high potential for dust production and the Site is active for an extensive period.<br>▪ Avoid site run off of water or mud.<br>▪ Keep site fencing, barriers and scaffolding clean using wet methods.<br>▪ Remove potentially dusty materials from site as soon as possible.<br>▪ Cover, seed or fence stockpiles to prevent wind whipping.<br>▪ Ensure all vehicles switch off engines when stationary.<br>▪ Avoid the use of diesel or petrol powered generators where possible.<br>▪ Only use cutting, grinding and sawing equipment with dust suppression equipment.<br>▪ Ensure an adequate supply of water on-site for dust suppressant.<br>▪ Use enclosed chutes and conveyors and covered skips.<br>▪ Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use water sprays on such equipment where appropriate.<br>▪ Ensure equipment is readily available on-site to clean up spillages of dry materials.<br>▪ No on-site bonfires and burning of waste materials on-site.<br><br>**Earthworks**<br>▪ Re-vegetate earthworks and exposed areas /soil stockpiles to stabilise surfaces as soon as practicable.<br>▪ Only remove the cover in small areas during work and not all at once. |

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| | | **Construction**<br>▪ Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless required for a particular process.<br>▪ Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emissions control systems.<br><br>**Trackout**<br>▪ Use water assisted dust sweepers on the Site access and local roads if required.<br>▪ Avoid dry sweeping of large areas.<br>▪ Ensure vehicles entering and leaving the Site are covered to prevent escape of materials.<br>▪ Record inspection of on-site haul routes and any subsequent action, repairing as soon as reasonably practicable.<br>▪ Install hard surfaced haul routes which are regularly damped down.<br>▪ Install a wheel wash with a hard-surfaced road to the Site exit where site layout permits. |
| Chapter 12: Noise and Vibration | Construction | Best Practicable Means will be used to reduce noise during the construction phase and the construction will be managed in accordance with a CEMD/CEMP, agreed with the authorities prior to commencement of development.<br><br>Construction noise monitoring will be carried out in the event of complaints with an agreed procedure set out in the CEMD.<br><br>Vibration monitoring should be carried out in respect of blasting at BP1. Residents will be informed when blasting will occur. |
| Chapter 13: Ecology and Ornithology | Construction | <u>Best Practice during detailed Design and Construction</u><br><br>Best practice measures will be effectively implemented during construction to avoid / minimise potential impacts on the environment. This includes measures such as:<br><br>▪ Micro-siting and detailed design of temporary and permanent works to further avoid / minimise impacts on surface waters and other sensitive habitats (e.g. detailed design of watercourse crossings, access track route and associated drainage, hardstandings, borrow pits).<br>▪ Pre-construction surveys and appropriate mitigation measures implemented, as required, to help ensure that impacts on protected species are avoided / minimised and that works proceed lawfully with respect to the legislation protecting the species (as detailed in the proposed Species Protection Plans, an outline of this is provided in Technical Appendix 13.4).<br>▪ Pre-construction, during construction and post-construction monitoring of fish populations and water quality from sampling locations agreed with the relevant consultees alongside regular on-site monitoring of water quality with a rapid and effective reaction to any exceedances (as detailed in proposed Fish and Water Quality Monitoring Plans, as outlined in this Chapter, see section 13.10). Pre-works fish rescues will be completed where required.<br>▪ Best practice drainage design / management, pollution prevention and control measures during construction and site restoration to help ensure that effective protection of surface waters and other sensitive habitats. These measures would apply to all relevant aspects of the proposed works including the following: |

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| | | ○ cement batching and handling;<br>○ all excavations, peat and soil/subsoil handling, track and hardstanding construction and operation;<br>○ stone extraction and crushing; and<br>○ storage, handling and use of all fuels, oils, hydraulic fluids, etc.<br>○ Appropriate use and storage of excavated soils and vegetation turfs for track verges and batters, wind turbine bases and crane pad batters.<br>▪ Tree felling/clearance operations would follow all applicable and current best practice guidance to avoid / minimise impacts on sensitive habitats (e.g. Forests and Water Guidelines).<br>▪ Effective dust prevention and suppression measures are in place across the construction site to protect surface waters and other sensitive habitats.<br>▪ Effective fire prevention and control measures are in place and always followed to minimise the risk of wildfire during the works.<br><br>Environmental protection measures would be fully detailed in the final CEMD/CEMP, Peat Management Plan (PMP), Species Protection Plans (SPPs) and Site Restoration Plan (SRP). The appointed Ecological Clerk of Works (ECoW) will be present during detailed design, setting out, enabling works, main construction phase and site restoration to help ensure that the measures set out in these documents are followed, correctly implemented and are effective.<br><br>The ECoW will have the authority to halt works where they are not satisfied that environmental protection measures have either been implemented correctly or where, on a case-by-case basis, the desired outcome has not been achieved (e.g. where surface water protection may require additional targeted measures).<br><br><u>General Bird Protection Measures during Construction</u><br><br>Pre-construction black grouse and breeding raptor surveys, completed by suitably experienced ornithologists, are proposed in order to help inform the approach to the construction works associated with the proposed development so that black grouse leks and breeding Schedule 1 species (e.g. hen harrier, merlin, short-eared owl) active nest sites are protected and would not be disturbed by construction works, including vehicle movements along the main access tracks, during the breeding season.<br><br>In the spring / summer prior to any construction works being undertaken (including enabling works and ground investigations) surveys would be undertaken to identify any black grouse lek sites and Schedule 1 species breeding activity and to demarcate areas potentially sensitive to disturbance. The Applicant would appoint a suitably experienced ECoW to oversee the works and help ensure that suitable protection zones are established and adhered to during the works. Species and site-specific buffer zones, following current best practice, would be established, appropriate to the specific circumstances, under the advice of a suitably experienced ornithologist.<br><br>In addition to the pre-construction surveys, all works areas would be checked by a suitably experienced ecologist/ornithologist or the ECoW for the presence of any nesting birds in advance of works commencing during the main bird breeding season. |

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| | | Should any active nest sites be found in areas where construction works are proposed, the location of the nest would be protected from damage and disturbance.<br><br>All works would be monitored by a suitably experienced ecologist / ornithologist or the ECoW to help ensure that protection measures are properly implemented and maintained and that works proceed in accordance with best practice and the requirements of the legislation protecting breeding birds. The ECoW would provide a toolbox talk before any personnel start on site which will cover the issue of breeding birds, their legal protections, what to look for and what to do should breeding bird behaviour or a potential nest site be found.<br><br><u>Site Reinstatement</u><br><br>Careful reinstatement of areas of disturbed ground, outside of the plantation areas, would be carried out. This would include re-use of suitable turves and soil, from areas stripped prior to construction works, and native plant seed mixes (appropriate to the habitats affected and the soil conditions) to encourage rapid revegetation and stabilisation of areas of exposed peat and mineral soils along the edges of the tracks, turbine bases, crane platforms, temporary compounds, borrow pits etc. This would follow a pre-agreed method statement that is approved by the ECoW and would be overseen and monitored by the ECoW. Where reinstatement is deemed not to meet the pre-agreed minimum standard then remedial measures would be put in place to address any such issues as quickly as possible. |
| | Operation | <u>General Best Practice Measures during Operation</u><br><br>During the operational phase, periodic maintenance would be required on the wind turbines and tracks. Access to areas requiring maintenance would be confined to areas previously used for construction activities with no new access tracks constructed.<br><br>Method statements for all potential maintenance and emergency maintenance works would be developed in accordance with environmental best practice to ensure that the risk of appreciable physical damage or pollution to sensitive terrestrial and freshwater habitats during operational site activities are minimised.<br><br>Site operational drainage would be designed and implemented to best practice standards and would be regularly checked and maintained.<br><br>Pollution spill kits would be made available at suitable locations across the site and would be maintained. All site operatives would be briefed on the location of the spill kits and how to use them effectively with clear steps on any further actions to take should a significant pollution incident occur.<br><br>Effective fire prevention and control measures will be implemented and always followed to minimise the risk of wildfire during site operation. |

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| | | Habitat Management Plan<br><br>Although significant residual effects on habitats are not anticipated, habitat creation and enhancement under a Habitat Management Plan (HMP) is proposed. It is intended that the detailed HMP would be developed, in consultation with NatureScot and other key stakeholders, well in advance of works commencing on the proposed development, and secured by a condition attached to any forthcoming consent.<br><br>The proposed habitat creation and enhancement areas are shown indicatively on Figure 13.9 and comprise the following:<br><br>▪ Area (A) of blanket bog enhancement (re-wetting, burning and grazing controlled) outside of the proposed wind turbine area = c. 142 ha.<br>▪ Area (B) of blanket bog enhancement (re-wetting, burning and grazing controlled) within the wind turbine area = c. 167 ha.<br>▪ Area of native woodland planting (suitable mix of native species with a high proportion of Scots pine to increase suitability for capercaillie) = c. 20 ha.<br>▪ Area of long-rotation muirburn (management focus on protecting and improving habitat for breeding hen harrier and merlin) = c. 178 ha<br><br>The HMP would detail the proposed drain blocking plan, management prescriptions, management programme, long-term vegetation and hydrological monitoring of the bog restoration area and detailed planting proposals for the establishment of an area of native woodland within the site.<br><br>Monitoring<br><br>**Bat Mortality Risk**<br>The residual risk to bat populations from wind turbine related mortality is not significant. However, given the industry-wide issue of pre-construction bat activity surveys accurately forecasting the risk to bats during wind farm operation (see discussion within section 13.7) and due to the presence of species that are of relatively high risk of wind turbine mortality (i.e. common and soprano pipistrelles) it is proposed that the following measures will be undertaken during the operation of the proposed development:<br><br>▪ Bat activity monitoring (including monitoring at wind turbine hub height) would be completed for at least three years after the proposed development becomes operational, in order to inform the need for a wind turbine bat management protocol (see below);<br>▪ The “feathering” of turbine blades to reduce rotation speeds while idling at very low wind speeds will be implemented; and |

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| | | ▪ A bat carcass search programme for at least three years after the Proposed Development becomes operational, would be implemented. It would include trials to determine values for site-specific biases that affect estimates of bat mortality from carcase searches, such as scavenger removal rates and search accuracy.<br><br>If the monitoring identifies a level of bat mortality occurring above an 'incidental' level (subject to agreement with NatureScot as to what rate of mortality is considered 'incidental') a wind turbine bat mitigation protocol would be developed and implemented. The aim of the protocol would be to minimise the risk of fatalities occurring during periods of elevated risk to bats. This would be achieved by opening the blade pitch into the fully feathered position, which reduces blade rotation speed to <1 rpm (referred to as 'curtailment').<br><br>The details of any turbine bat mitigation protocol that is required (i.e. the trigger points for blade feathering and unfeathering, which would be software controlled) would be determined based on the results of weather (e.g. rain, wind speed and temperature) and bat activity monitoring. This is so that the conditions that correspond to nights with comparatively high bat activity at turbine height can be determined. From this, a protocol would be developed which is effective at minimising the risk to bats whilst also ensuring that curtailment is as efficient as possible. That is, avoiding curtailment occurring unnecessarily when the risk to bats is low temporally (e.g. daytime, nights outside of active period) or spatially (e.g. some wind turbine locations may have consistently low levels of activity).<br><br>The effectiveness of the turbine bat management protocol would also be monitored for three years through a robust bat carcass search programme. A method using specially trained dogs, developed by Exeter University, has been proven to be far more effective than human searches particularly on difficult terrain such as clear-fell areas (see Appendix 4 of the NatureScot et al. 2021 guidance document for further details).<br><br>**Bird Monitoring**<br>A detailed breeding bird monitoring plan would be developed, focusing on the key species of concern for this assessment (i.e. black grouse, golden plover, curlew, golden eagle, hen harrier and merlin), in consultation with NatureScot, at least 12 months prior to the start of construction works.<br><br>The monitoring plan would detail survey methods, and the reporting mechanism, for each focal species. The surveys would be completed by suitably experienced ornithologists.<br><br>The surveys would start (as a minimum) in the breeding season prior to works commencing and for at least the first ten years of wind farm operation (i.e., annually for the first three years, then fifth and tenth years). At which point the need for further monitoring would be reviewed. The surveys would include the proposed wind farm area and appropriate buffer zones. The surveys would be co-ordinated with the Highland Raptor Study Group (HRSG) to avoid any unnecessary duplication and disturbance. |

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| | | Systematic bird carcass searches would be completed after the wind farm becomes operational. The methods and duration of this monitoring would be approved by THC, in consultation with NatureScot, prior to the wind farm becoming operational. The carcass searches would be within a 100m radius area of each turbine and would be focused on periods of elevated activity and collision risk. The monitoring would be preceded by trails to determine values for site-specific biases that affect estimates of bird mortality, such as scavenger removal rates and search accuracy.<br><br>It is also proposed that monitoring of hen harrier breeding activity within or near to the proposed wind turbines (within the area that the Applicant would have control over) would include consideration of targeted management of vegetation height (i.e. within at least 300m of the proposed turbines and extending as far as the landholding boundary). This is to discourage nesting where the ornithologist undertaking the monitoring programme firmly believes that there is an elevated risk of collision or if the carcase searches and monitoring surveys indicate that this would be an effective measure to reduce the risk to the species. For avoidance of doubt, any such management would be undertaken as a 'last resort' only where appropriate and not during the breeding season.<br><br>Regular monitoring for any sheep or deer cattle carcases within the wind arm area, that might attract golden eagle and white-tailed eagle, will be undertaken to reduce the risk of collisions occurring. All such carcases will be removed from the wind farm area and disposed or taken to a suitable provisioning site at a safe location well away from any wind turbines and not in a location where eagles nesting or roosting in the wider area might have to fly through a wind farm to get to the location.<br><br>**Fish & Aquatic Habitats**<br>A Fish Monitoring Plan (FMP) will be developed in consultation with relevant regulators and stakeholders (e.g. Marine Scotland, the River Findhorn District Salmon Fishery Board and the FNLRT). The FMP would be developed in detail well in advance of works commencing on the site. The FMP would set out in sufficient detail the proposed fish monitoring regime prior to, during and following construction. It would also set out the measures and procedures that would be followed to ensure the protection of fish and fish habitats during the works. Water quality monitoring is also proposed prior to and during the construction phase, this as outlined in Chapter 7 mitigation above,<br><br>**Deer Monitoring**<br>A Deer Monitoring Plan (DMP) will be developed, in consultation with NatureScot, that would detail the methods that to be followed for deer count surveys prior to, during and following construction of the proposed development. The DMP would cover the proposed wind turbine area and wider development site (including all the proposed HMP areas) and the section of the Moidach More SAC/SSSI that lies within the same landholding as the proposed development (this to be shown on proposed Figure 13.3b, which is a larger scale version of Figure 13.3).<br><br>Fixed vegetation monitoring quadrats would be established at appropriate locations within the SAC to provide baseline data of vegetation condition in advance of construction works commencing on site. Should the monitoring study show evidence that the proposed development has significantly affected the distribution of deer within and outside of the proposed development areas and that this effect persists beyond the construction phase, then further vegetation monitoring would be proposed to |

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| | | assess any effect on the condition of habitats, due to changes in deer browsing and trampling, within the section of the SAC adjacent to the site. To address any effects, or as a pre-emptive measure, should monitoring indicate a more than a short-term change in deer behaviour in response to the construction works and site operation, then a deer control plan would be agreed with NatureScot and the relevant consultees, to ensure that there are no long-term adverse effects on the SAC/SSSI habitats. |
| | Decommissioning | General Best Practice Measures during Decommissioning<br>During the decommissioning process there is the potential for impacts to occur on protected species. Pre-works surveys and the relevant SPP measures proposed for the construction phase (see above) will apply to the works. However, these measures will be reviewed, in advance of the decommissioning, in order to consider the results of monitoring during the operation of the wind farm, the results of the pre-decommissioning surveys and advances in best practice approaches to mitigate impacts on breeding birds that may have emerged since the wind farm was constructed. |
| Chapter 15: Aviation | Operation | None required, subject to the installation and operation of the proposed WTG mitigation radar at Inverness Airport. |
| Chapter 16: Other Issues | Construction | Forestry<br><br>The proposed development requires 0.35ha of plantation woodland to be felled to facilitate the construction of the upgraded site access. Should it be considered necessary, Arboricultural Method Statements and/or Tree Protection Plans can be provided as part of the CEMP for approval, prior to construction and any felling. |
| | Operation | Telecommunications<br><br>Whilst operating, wind turbines can potentially interfere with television broadcasting systems. The proposed development is located within the STV North Ltd television region and television transmissions for properties near the development are provided by the Knockmore transmitter group. If the proposed development interferes with these transmissions during its operation, reasonable measures would be put in place such as onsite survey and/or installation of satellite television or upgrades of the current antennae system. |