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16.0 Schedule of Mitigation

16.1 Introduction

The Schedule of Mitigation provides a summary of good practice, mitigation measures and commitments that have been proposed throughout the Environmental Impact Assessment (EIA) Report to prevent, reduce or offset the effects of the proposed development on the environment.

Good practice and mitigation measures have been integral to the design evolution of the proposed development as described in **Chapter 3: Site Selection and Alternatives**. A series of environmental and technical constraint lead design reviews were undertaken to minimise potential significant environmental impacts prior to finalising the final design of the proposed development. Areas which were examined in depth include landscape and visual constraints, peat, sensitive habitats, cultural heritage and hydrological constraints.

16.2 Schedule of Commitments

The mitigation measures and best practice commitments in T**able 16.1** are those which would be applied prior to construction, during construction and during operation of the proposed development. A number of these measures are embedded mitigation, undertaken through good practice and to adhere to relevant legislation during all stages of the proposed development.

16.3 Overall Statement of Significance

Provided that the proposed mitigation measures are successfully implemented, the residual effects related to most environmental disciplines would not be considered significant effects in the context of the EIA regulations, with the exception of some significant localised landscape and visual effects on the unit of LCT 9 Low Forested Hills which includes the Site, as a result of the proximity of the turbines which will become a dominant feature, alongside the forestry, in this small area. Other units of this LCT will not be significantly affected.

There will also be significant effects on LCT 8 Upland Farmland which surrounds the forested hills of the site. These significant effects will primarily arise from the proximity and relatively wide visibility of the turbines within 5km, though there would also be changes as a result of views towards the turbines from the rural areas around Keith.

Significant effects will also arise on the unit of LCT 3 Rolling Coastal Farmland near Clochan and Drybridge. These significant effects will arise as a result of views towards the turbines within 2-5km, particularly from the broader and more open upland areas closer to the site and in the eastern end of the unit.

All renewable energy developments incorporating wind turbines are likely to give rise to some significant landscape and visual effects. In the case of the proposed development, significant landscape character effects would be confined to a distance of approximately 5km of the proposed wind turbines. It is considered that the landscape can accommodate the proposed development, alongside other existing operational, consented and proposed wind farms.

Potential significant effects on blanket bog and red squirrels have been identified during the construction phase of the wind farm. Mitigation is provided in the form of peat restoration proposals in the Outline Biodiversity Enhancement and Restoration Plan, and the provision of denning boxes for red squirrel.

Potential significant effects during operation on some bat species through collisions with the wind turbines has been identified.

Mitigation will be implemented during operation in order to reduce the risk of turbine-related bat mortality specifically for Pipistrellus species, though this will also further mitigate for the two low-risk species brown long-eared and Myotis sp. The mitigation measures will comprise curtailment of the operation of all wind turbines during certain weather conditions at certain times of year. In the

event the scheme is consented, a Bat Mitigation and Monitoring Plan will require to be provided pre-construction.

Table 16.1: Summary of Mitigation and Commitments

EIAR Chapter	Matter/Effect requiring mitigation	Timing / Phase	Mitigation Measure
Chapter 2: Proposed Development Description	Environmental management	Construction	The applicant would engage an Environmental Clerk of Works (EnvCoW) on-site during the construction phase. The Principal Contractor (PC) will ensure construction activities are carried out in accordance with the mitigation measures outlined in this EIA Report and any planning conditions, this will be monitored by the applicant and the EnvCoW. An outline Construction Environmental Management Plan (CEMP) is provided as Technical Appendix 2.1. This sets out the applicant's requirements for inclusion within a detailed CEMP and other documents including guidance and best practice for adoption during construction of the proposed development. The outline CEMP provides an overview of the following aspects of environmental management required to mitigate any potential environmental incidents during construction: • design philosophy and construction methodologies; • surface and ground water management; • water quality monitoring; • flood risk management; • private water supply management; • waste and resource management; • wastewater and water supply monitoring and control; • noise and vibration control; • dust and other emissions to air control. • spoil management; • peat slide monitoring and control; • oil and chemical delivery and storage; • temporary lighting management; • existing on-site utilities management; • post construction reinstatement; • construction traffic management; • health and safety management; • public liaison provision; and • decommissioning and restoration methodologies.

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			To ensure all mitigation measures outlined within this EIA Report are carried out on-site, contractors will be required to develop a Construction Environmental Management Plan (CEMP) which will form an overarching document for all site management requirements, including: • A Pollution Prevention Plan; • A Peat Management Plan; • A Construction Traffic Management Plan; • A Site Waste Management Plan; • A Borrow Pit Management Plan; • A Water Quality Monitoring Plan; • Unexploded Ordnance Strategy. The final CEMP would be agreed in advance with Moray Council (MC) in consultation with other stakeholders, prior to commencement of construction. Performance against the CEMP would be monitored by the applicant, the EnvCoW and PC throughout the construction period.
Chapter 6: Landscape and Visual Impact Assessment	Wind turbine layout and height of wind turbines	Operation	The design of the wind turbine layout has taken into account the local and wider landscape and visual receptors to best design a scheme which minimises the impact on the landscape. This takes account of adjacent and nearby windfarms and those in the planning system.
	Aviation Lighting	Operation	The applicant is committed to reducing significant environmental effects predicted during the development of its sites and the following mitigation measures will be deployed at the proposed development as part of the reduced Aviation Lighting Scheme agreed with the Civil Aviation Authority (CAA). • Intermediate level 32 candela lights are not required to be fitted on the turbine towers; • Medium intensity steady red (2,000 candela) lights will only be required on the nacelles of T01, T02, T03, T05, T06, T08, T13, T15 and T16; and • The lights on these turbines to be capable of being dimmed to 10% of peak intensity when the lowest visibility as measured at suitable points around the wind farm by visibility measuring devices exceeds 5km.

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Chapter 7: Cultural Heritage & Archaeology	Protection of on-site assets	Construction	The proposed development has the potential to result in direct impacts to heritage assets as a result of any groundworks or ground disturbance undertaken as part of the construction phase of the proposed development. Mitigation measures proposed are: • fencing off and avoidance of known assets that could otherwise be accidentally damaged during construction works; and • a watching brief on the elements of the groundworks that have the potential to have a direct impact on unrecorded buried archaeology. The precise scope of the proposed mitigation measures would be agreed with the Moray Council archaeologist on behalf of the applicant and the agreed mitigation programme would be outlined and carried out following a Written Scheme of Investigation.
Chapter 8: Ecology	General	Pre-construction	The applicant has committed to the production of a CEMP to the satisfaction of NatureScot and other relevant stakeholders, before construction commences, and would follow Windfarm Good Construction Guidance, Scottish Renewables et al (2019). An outline CEMP is included within Technical Appendix 2.1.
	Protected Species	Construction	Pre-construction surveys. Pre-work checks in suitable areas identified during pre-construction surveys. Species specific protection plans to be developed prior to construction commencing. Habitat enhancement of riparian corridors/denning feature creation in outline BERP. Buffers/appropriate working methods under EnvCoW supervision. Fish/Aquatic invertebrate monitoring through a water quality monitoring plan.
	Bats	Operation	Mitigation will be implemented during operation in order to reduce the risk of turbine-related bat mortality specifically for Pipistrellus species, though this will also further mitigate for the two low-risk species brown long-eared and Myotis sp. The mitigation measures will comprise curtailment of the operation of all wind turbines during certain weather conditions at certain times of year. In the event the scheme is consented, a Bat Mitigation and Monitoring Plan will require to be provided pre-construction.
Chapter 9: Ornithology	Nest damage or destruction	Construction	Implementation of good practice, through CEMP and Bird Protection Plan.

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	Disturbance/ displacement	Construction	Implementation of good practice. Disturbance free zone of 300-500 m around any goshawk nests
	Birds	Operation	No specific mitigation measures other than the good practice mitigation measures outlined in Chapter 9 are required for the operational phase. However, compensation and enhancement measures are proposed in the form of the Biodiversity Enhancement and Restoration Plan (BERP), which would remain in place during the operational phase. An Outline Biodiversity Enhancement and Restoration Plan (OBERP) has been prepared and is available in Technical Appendix 8.5: OBERP. A detailed BERP would be prepared post consent, which will focus on increasing the area of native woodland, bog restoration and heath restoration, in order to provide nature conservation enhancements that would apply for the lifetime of the proposed development with positive effects felt thereafter. The increase in these habitats therefore has the potential to increase the amount of breeding and foraging habitat for some bird species.
Chapter 10: Geology, Hydrology and Hydrogeology	Water Quality	Pre-Construction	It has been recognised in this assessment that a programme of water monitoring would be required prior to and during construction activity. The monitoring programme would be agreed with Scottish Water, SEPA, NatureScot, MC, Marine Science Scotland, and local fisheries boards and it is expected to include monitoring of the watercourses which drain from the Site.
	Hydrology Hydrogeology Peat	Construction	As there are no predicted significant effects under the terms of the EIA Regulations, other than the good practice measures that the developer would implement as standard (and as described in Chapter 10), no additional specific mitigation during construction is required.
	Peat Slide Risk		A geotechnical risk register will be maintained during the construction and post-construction phase of the proposed development. It is expected that this would be maintained by the developer, secured by an appropriately worded predevelopment condition.
	Peat		During and following construction the drainage measures deployed at the Site (temporary and permanent) would be subject to routine inspection by the dedicated Site EnvCoW and developer. This would be specified in a site-specific CEMP and would be secured by an appropriately worded predevelopment condition.
Chapter 11: Traffic and Transport	Construction Traffic	Construction	A Construction Traffic Management Plan will be agreed with Moray Council.

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			In addition to the use of general good practice an Abnormal Load Traffic Management Plan (ATMP) would be drawn up to secure permissions for the movement of abnormal loads and would include details of any required temporary widening and other road improvement measures, together with detailed consideration of vehicle swept paths, loadings, structural assessments (where required) and temporary street furniture removal details. The document would be prepared in consultation with the Roads Authority, Transport Scotland and the emergency services, including Police Scotland. An element of preparation of the ATMP would be a trial run, which would be undertaken in consultation with the Roads Authority and any other statutory bodies required; the required permissions would be obtained as identified in the ATMP. A road condition survey would also be undertaken.
Chapter 12: Noise	Construction Noise	Construction	Construction noise will be minimised through the use of standard 'best practicable means' to reduce the potential level of noise generated as part of the construction activities. This will include the restriction of certain activities to certain times, use of quiet working methods and ensuring construction plant is in good working order. Any specific mitigation measures that may be required for certain activities will be detailed within the detailed CEMP, to be secured by means of a planning condition.
	Operational Noise	Operation	The proposed development is located sufficiently far from receptors such that predicted operational and cumulative operational noise levels associated with its introduction will meet the limiting requirements of ETSU-R-97, without the need to impose additional mitigation or curtail the operation of the turbines. Suitably worded planning conditions are a common means to ensure that operational compliance measurements may be undertaken in the event of complaints relating to noise, and appropriate recourse can then be sought by the Local Authority should operational noise levels exceed consented limits. Standard conditions often require that, should a complaint be received, appropriate monitoring takes place to determine whether specified noise limits are being adhered to and whether remedial measures are required to be put in place on that basis. However, in this instance, operational noise levels from the proposed development at some receptors may be so low that it may be difficult or impossible to distinguish from other environmental noise sources and existing turbine noise immissions via typical measurement practices.
Chapter 14: Aviation and Radar	MOD Radar - RAF Lossiemouth	Operation	Trials to be undertaken at RAF Lossiemouth in winter 2023-24 will test whether the Thales STAR-NG meets MoD requirements for mitigation of the effects of wind turbines. These trials will include assessment of the Wind Farm Filter, an additional Thales radar data processing product. The Applicant is willing to agree to a suitably

EIAR Chapter	Matter/Effect requiring mitigation	Timing / Phase	Mitigation Measure
			worded planning condition providing for a radar mitigation scheme to be submitted, approved and implemented prior to erection of the turbines.
	PAR – RAF Lossiemouth	Operation	The Applicant has proposed a mitigation scheme to the MoD that would consist of slewing the azimuth orientation of the RAF Lossiemouth PAR, when runway 28 is in use, to an angle that would place all of the turbines in the proposed development outside of the radar's azimuth coverage arc. Slewing of PARs to avoid adverse effects from buildings and other obstructions is an established measure in use at a number of UK military airfields. It would also be facilitated by a revised Defence Standard issued in 2019 which defines the required azimuth coverage of PAR to a 20° arc (nominally 10° either side of the final approach track). The Applicant is willing to agree to a suitably worded planning condition providing for a radar mitigation scheme to be submitted, approved and implemented prior to erection of the turbines. The Applicant has also proposed to the MoD that mitigation of the effects of the proposed development on the RAF Lossiemouth PAR could be achieved by installation of an Instrument Landing System (ILS) serving runway 28.
	Buchan Air Defence Radar	Operation	Should the effects of the proposed development on the Buchan air defence radar be determined to be unacceptable, a standard method of mitigation is available in the shape of a Non-Auto Initiation Zone (NAIZ) applied to the airspace overhead the wind farm.
	Aviation Lighting	Operation	A reduced lighting scheme has been submitted to and approved by the CAA. The lighting scheme consists of: • 2000 candela steady red lights on Turbines 1, 2, 3, 5, 6, 8, 13, 15 and 16; • MoD-specification infra-red lights (not visible to the naked eye) on all turbines except T10; and • no mid-tower lighting.
Chapter 15: Other Issues	Shadow Flicker	Operation	Shadow flicker control modules, consisting of light sensors and specialised software, will be installed on the turbines that can prevent operation during periods when shadow flicker can be experienced at nearby properties. The installation of a programmable shadow flicker module will allow the control of turbines in order to eliminate shadow flicker. The correct operation of the installed shadow flicker control measures will ensure that there will be no impact from shadow flicker. If a complaint is made regarding shadow flicker, an investigation would take place which considers the weather conditions at the time of the alleged shadow flicker, to determine which turbines were, or were not, creating the effect and the extent of the shadow flicker created. If the

EIAR Chapter	Matter/Effect requiring mitigation	Timing / Phase	Mitigation Measure
			investigation confirms a loss of residential amenity at any location, the technical mitigation measures built into these turbines would be activated. The operation and performance of the shadow flicker control measures will be monitored on an ongoing basis.
	Television	Operation	In the event that TV reception from the Knockmore transmitter is found to be adversely affected by the proposed development – for example as a result of a complaint from a subscriber – mitigation can be readily implemented by changing the orientation of the subscriber's receiver antenna from Knockmore to either Rosemarkie or Rumster Forest. Alternatively, affected subscribers may be offered a switch to satellite TV, funded by the applicant.
	Telecommunication Links	Operation	The applicant has engaged with JRC from the pre-scoping stage on the means of mitigating the effects of the proposed development on the links for which they hold responsibility. These discussions have identified a number of methods of technical mitigation. The applicant is continuing to discuss the means of implementing those methods and is confident that an agreement can be reached that will permit the proposed development to proceed without significant adverse effects on any of the links for which JRC has responsibility.