

18.

# SCHEDULE OF MITIGATION AND MONITORING MEASURES

18.1

## Introduction

All mitigation and monitoring measures relating to the pre-commencement, construction, operational and decommissioning phases of the Proposed Project are set out in the relevant chapters of this EIAR.

All mitigation which will be implemented during the various phases of the project are presented in Table 18-1 below. The mitigation measures have been grouped together according to their EIAR Chapter and project phases as follows:

- Pre-Commencement Phase (Prior to the implementation of any groundworks)
- Construction Phase
- Operational Phase
- Decommissioning Phase

The mitigation measures in the below format, in Table 18-1, provides an easy to audit list that can be reviewed and reported on during each phase of the Proposed Project. The process of site inspections and environmental audits are set out in the Construction and Environmental Management Plan (CEMP) which is included as Appendix 4-2 of this EIAR. The tabular format in which the below information is presented, can be further expanded upon during each project phase, to provide a reporting template for site compliance audits.

All monitoring measures which will be implemented during the pre-commencement, construction, operational and decommissioning phases of the Proposed Project are outlined in Table 18-2. All monitoring measures were set out in the relevant chapters of this EIAR. The monitoring measures are presented in terms of the monitoring requirement, frequency of monitoring and the mechanism for reporting results where applicable. By presenting the monitoring measures in the below format, it is intended to provide a monitoring schedule that can be reviewed and tracked during all phases of the project to ensure all the required monitoring is completed as required.

It is intended that the CEMP will be updated, where required, prior to the pre-commencement phase of the Proposed Project to include all mitigations and monitoring measures, planning conditions and or alterations to the EIAR and application documents should they emerge during the course of the planning process and would be submitted to the Planning Authority for written approval.

18.2

## EIAR Mitigation Measures

Table 18-1 Schedule of Mitigation

| Ref. M no.                                                  | Reference Heading        | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
|-------------------------------------------------------------|--------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|
| <b>EIAR Chapter 4 – Description of the Proposed Project</b> |                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                 |
| <b>Pre-Commencement Phase</b>                               |                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                 |
| MM1                                                         | Environmental Management | EIAR Chapter 4     | <p>➤ All proposed activities on the Site will be provided for in a Construction and Environmental Management Plan (CEMP). A CEMP has been prepared for the Proposed Project and is included in Appendix 4-5 of this EIAR. The CEMP sets out the key environmental considerations to be considered by the contractor during construction of the Proposed Project. The CEMP includes details of drainage, spoil management and waste management, and details the mitigation and monitoring measures to be implemented in order to comply with the environmental commitments outlined in the EIAR. The contractor will be contractually obliged to comply with all such measures. In the event planning permission is granted for the Proposed Project, the CEMP will be updated prior to the commencement of the development, to address the requirements of any relevant planning conditions, including any additional mitigation measures which are conditioned and will be submitted to the Planning Authority for approval.</p> |              |                 |
| MM2                                                         | Environmental Management | CEMP Section 4     | <p>➤ The Project Developer will appoint a design team to prepare the detailed design for the Proposed Project prior to the commencement of construction and ensure all planning and environmental obligations are met. The developer will appoint a Project Contractor who will be responsible for the construction of the Proposed Project in accordance</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                 |

| Ref. M no. | Reference Heading     | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
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|            |                       |                    | <p>with this CEMP which will be updated by the contractor as required during the construction phase of the Proposed Project. Any updated CEMP must meet or exceed the standards and requirements set out in this document.</p> <ul style="list-style-type: none"> <li>➤ The Environmental Clerk of Works (ECoW) will be nominated by the Project Developer to oversee the Project Contractor's effective implementation of the Proposed Project's environmental requirements and obligations, as captured in the CEMP. The ECoW will be responsible for monitoring the works of the Project Contractor from an environmental perspective on behalf of the Project Developer. For the sake of expediency, the ECoW will report their ongoing audit findings, monitoring results and site observations to both the Project Developer and the Project Contractor, having been nominated by the developer to fulfil the role.</li> <li>➤ The ECoW will have the power to halt the works, should the need arise and will be supported by the developer to ensure the contractor adheres to such an instruction.</li> <li>➤ The ECoW will also have to call upon the Project Ecologist, Project Hydrologist, or other members of the Project Developer's design team, as required, to oversee the contractor's works on-site.</li> </ul> |              |                 |
| MM3        | Surface Water Quality | CEMP Section 4     | <ul style="list-style-type: none"> <li>➤ Baseline water quality field testing and laboratory analysis will be undertaken where required prior to commencement of felling and construction at the Site.</li> <li>➤ Analysis will be for a range of parameters with relevant regulatory limits along with Environmental Quality Standards (EQSs) and sampling will be undertaken at designated locations as outlined in Table 9-8 of the EIAR.</li> <li>➤ Baseline sampling will be completed on at least two occasions, and these should ideally coincide with low flow and high flow stream conditions. The high flow sampling</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |

| Ref. M no. | Reference Heading   | Reference Location                                 | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Audit Result | Action Required |
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|            |                     |                                                    | event will be undertaken after a period of sustained rainfall, and the low flow event will be undertaken after a dry spell.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |
| MM4        | Concrete Deliveries | EIAR Chapter 4                                     | <ul style="list-style-type: none"> <li>➤ Only ready-mixed concrete will be used during the construction phase, with all concrete being delivered from local batching plants in concrete delivery trucks.</li> <li>➤ Before leaving the Site, washing of the delivery truck will be minimised and restricted to designated wash out areas. Wash out will be restricted to the concrete lorry's chute only. Concrete trucks will be washed out fully at the off-site batching plant, where facilities are already in place.</li> <li>➤ The small volume of water that will be generated from washing of the concrete lorry's chute will be directed into a temporary lined impermeable containment area, or a Siltbuster-type concrete wash unit or equivalent. This type of Siltbuster unit catches the solid concrete and filters and holds wash liquid for pH adjustment and further solids separation. The residual liquids and solids will be removed off-site by an appropriately authorised waste collector for disposal at an authorised waste facility. Where temporary lined impermeable containment areas are used, such containment areas are typically built using straw bales and lined with an impermeable membrane.</li> </ul> |              |                 |
| MM5        | Site Drainage Plan  | EIAR Chapter 4<br>CEMP Section 2<br>CEMP Section 3 | <ul style="list-style-type: none"> <li>➤ The Project Hydrologist will complete a detailed drainage design and maintenance plan before construction commences and will attend the Site to set out and assist with micro-siting of proposed drainage controls as outlined in Section 4.6 of the EIAR.</li> <li>➤ The early establishment of the drainage system will manage the risk of impacts on watercourses on and adjacent to the Site during construction. In addition, construction operations</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |

| Ref. M no. | Reference Heading                    | Reference Location                          | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                       | Audit Result | Action Required |
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|            |                                      |                                             | <p>will adopt best working practices and the development of the Site will be phased accordingly.</p> <p>➤ The early establishment of the drainage system will manage the risk of impacts on watercourses on and adjacent to the Site during construction. In addition, construction operations will adopt best working practices and the development of the Site will be phased accordingly</p>                                                          |              |                 |
| MM6        | Preparative Site Drainage Management | <p>EIAR Chapter 4</p> <p>CEMP Section 3</p> | <p>➤ Drains will be excavated, and silting ponds constructed to eliminate any suspended solids within surface water running off the Site.</p> <p>➤ An adequate quantity of straw bales, clean stone, terram, stakes, etc. will be kept on site at all times to implement the detailed drainage design measures as necessary. The detailed drainage measures will be installed prior to, or at the same time as the works they are intended to drain.</p> |              |                 |
| MM7        | Drainage Inspection                  | <p>EIAR Chapter 4</p> <p>CEMP Section 3</p> | <p>➤ Prior to commencement of works in sub-catchments across the Site, main drain inspections will be completed to ensure ditches and streams are free from debris and blockages that may impede drainage. It is proposed to complete these inspections on a catchment-by-catchment basis as the construction works develop across the Site, as works in all areas will not commence simultaneously.</p>                                                 |              |                 |
| MM8        | Watercourse Inspection               | <p>EIAR Chapter 4</p> <p>CEMP Section 2</p> | <p>➤ Confirmatory inspections of the proposed new watercourse crossing locations will be carried out by the Project Civil/Structural Engineer and the Project Hydrologist prior to the construction of the crossing.</p>                                                                                                                                                                                                                                 |              |                 |
| MM9        | Drainage Maintenance                 | <p>EIAR Chapter 4</p> <p>CEMP Section 4</p> | <p>➤ An inspection and maintenance plan for the on-site drainage system will be prepared in advance of commencement of any works. Daily visual inspections of drains and outfalls will also be performed during the construction period to ensure</p>                                                                                                                                                                                                    |              |                 |

| Ref. M no. | Reference Heading           | Reference Location                          | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
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|            |                             |                                             | <p>suspended solids are not entering streams and rivers on site, to identify any obstructions to channels and to allow appropriate maintenance of the drainage regime.</p> <p>➤ Any excess build-up of silt levels at dams, the settlement pond, or any other drainage features that may decrease the effectiveness of the drainage feature, will be removed.</p>                                                                               |              |                 |
| MM10       | Earthworks                  | CEMP Section 3                              | <p>➤ Drainage and associated pollution control measures will be implemented onsite before the main construction works commence. Where possible, drainage controls will be installed during seasonally dry ground conditions. This will reduce the possibility of impact on surface waters by suspended sediment released during construction and entrained in surface run-off.</p>                                                              |              |                 |
| MM11       | Felling                     | <p>EIAR Chapter 4</p> <p>CEMP Section 3</p> | <p>➤ Before the commencement of any felling works, an experienced and competent ECoW shall be appointed to oversee the keyhole and extraction works.</p> <p>➤ Prior to the commencement of works, review and agreement of the positioning by the Operator of the required Aquatic Buffer Zones (ABZs), silt traps, silt fencing, water crossings and onsite storage facilities for fuel, oil and chemicals will be carried out by the ECoW.</p> |              |                 |
| MM12       | Felling Drainage Management | <p>EIAR Chapter 4</p> <p>CEMP Section 3</p> | <p>➤ Prior to the commencement of tree felling for subsequent road construction the following key temporary drainage measures will be installed:</p> <p>➤ All existing dry forestry drains that intercept the proposed works area will be temporarily blocked down-gradient of the works using forestry check dams/silt traps;</p> <p>➤ Clean water diversion drains will be installed upgradient of the works areas;</p>                       |              |                 |

| Ref. M no. | Reference Heading  | Reference Location                   | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Audit Result | Action Required |
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|            |                    |                                      | <ul style="list-style-type: none"> <li>➤ Check dams/silt fence arrangements (silt traps) will be placed in all existing forestry drains that have surface water flows and also along existing forestry roadside drains; and,</li> <li>➤ A double silt fence perimeter will be placed down-slope of works areas that are located inside the watercourse 50m buffer zone.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |
| MM13       | Felling Licence    | EIAR Chapter 4                       | <ul style="list-style-type: none"> <li>➤ Felling will be carried out under the terms of a licence application to the Forest Service, as per the Forest Service's policy on granting felling licenses for wind farm developments.</li> <li>➤ The Forest Service's policy on granting felling licenses for wind farm developments requires that a copy of the planning permission for the Proposed Wind Farm be submitted with the felling licence application; therefore, the felling licence cannot be applied for until such time as planning permission is obtained for the Proposed Project.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |
| MM14       | Traffic Management | EIAR Chapter 4, 15<br>CEMP Section 3 | <ul style="list-style-type: none"> <li>➤ A detailed Traffic Management Plan (TMP), incorporating all the mitigation measures set out within the CEMP along with Chapter 15 of the EIAR, will be finalised and detailed provisions in respect of traffic management agreed with the roads authority and An Garda Síochána prior to construction works commencing on Site</li> <li>➤ Prior to the Traffic Management Plan being finalised, a full dry run of the transport operation along the potential routes will be completed using vehicles with attachments to simulate the dimensions of the wind turbine transportation vehicles. This dry run will inform the Traffic Management Plan for agreement with the relevant Authorities.</li> <li>➤ When the Proposed Grid Connection underground cabling route is located on public roads, a Traffic Management Plan will be prepared prior to any works commencing. A road opening licence will be obtained where required and all</li> </ul> |              |                 |

| Ref. M no. | Reference Heading                               | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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|            |                                                 |                                  | plant operators and general operatives will be inducted and informed as to the location of any services                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |
| MM15       | Spoil Management                                | ElAR Chapter 4<br>CEMP Section 2 | <ul style="list-style-type: none"> <li>➤ An interceptor drain will be installed upslope of the identified spoil management areas to divert any surface water away from these areas where necessary</li> <li>➤ Silt fences and double silt-fences will be emplaced down-gradient of spoil management areas and will remain in place throughout the entire construction phase, or until reseeded has been established to a sufficient level;</li> <li>➤ All the recommendations/best practice guidelines for the placement of spoil in identified spoil management areas and alongside access roads will be confirmed by the Geotechnical Engineer prior to construction</li> </ul> |              |                 |
| MM16       | Grid Connection underground cabling route works | ElAR Chapter 4                   | <ul style="list-style-type: none"> <li>➤ Before works commence, updated surveying will take place along the proposed cable route, with all existing culverts identified. All relevant bodies i.e. ESBN, Galway County Council etc. will be contacted and all up-to-date drawings for all existing services sought.</li> </ul>                                                                                                                                                                                                                                                                                                                                                     |              |                 |
| MM17       | Waste Management                                | ElAR Chapter 4<br>CEMP Section 3 | <ul style="list-style-type: none"> <li>➤ Prior to the commencement of the development, a Construction Waste Manager will be appointed by the Contractor. The Construction Waste Manager will be in charge of the implementation of the objectives of the Waste Management Plan (WMP), ensuring that all hired waste contractors have the necessary authorisations and that the waste management hierarchy is adhered to. The person nominated must have sufficient authority so that they can ensure everyone working on the development adheres to the management plan.</li> </ul>                                                                                               |              |                 |
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| Ref. M no.                | Reference Heading                               | Reference Location                                | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Audit Result | Action Required |
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| <b>Construction Phase</b> |                                                 |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |
| MM18                      | Refuelling                                      | <p>EIAR Chapter 4, 8, 9</p> <p>CEMP Section 3</p> | <ul style="list-style-type: none"> <li>➤ Wherever possible, vehicles will be refuelled off-site, particularly for regular road-going vehicles.</li> <li>➤ Onsite refuelling of machinery will be carried out at designated refuelling areas at various locations throughout the Site.</li> <li>➤ Heavy plant and machinery will be refuelled onsite by a fuel truck that will come to the Site as required on a scheduled and organised basis.</li> <li>➤ All refuelling will be carried out outside designated watercourse buffer zones.</li> <li>➤ Only designated trained and competent operatives will be authorised to refuel plant onsite.</li> <li>➤ Mobile measures such as drip trays and fuel absorbent mats will be used during refuelling operations as required.</li> <li>➤ All plant and machinery will be equipped with fuel absorbent material and pads to deal with any event of accidental spillage</li> </ul> |              |                 |
| MM19                      | Cement Based Products Deliveries and Management | <p>EIAR Chapter 4, 9</p> <p>CEMP Section 3</p>    | <ul style="list-style-type: none"> <li>➤ Only ready-mixed concrete will be used during the construction phase, with all concrete being delivered from local batching plants in concrete delivery trucks.</li> <li>➤ The use of ready-mixed concrete deliveries will eliminate any potential environmental risks of onsite batching.</li> <li>➤ Before leaving the Site, washing of the delivery truck will be minimised and restricted to designated wash out areas.</li> <li>➤ Wash out will be restricted to the concrete lorry's chute only.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                       |              |                 |

| Ref. M no. | Reference Heading   | Reference Location            | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Audit Result | Action Required |
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|            |                     |                               | <ul style="list-style-type: none"> <li>➤ Concrete trucks will be washed out fully at the off-site batching plant, where facilities are already in place.</li> <li>➤ The small volume of water that will be generated from washing of the concrete lorry's chute will be directed into a temporary lined impermeable containment area, or a Silbuster-type concrete wash unit or equivalent.</li> <li>➤ The residual liquids and solids will be removed off-site by an appropriately authorised waste collector for disposal at an authorised waste facility.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |
| MM20       | Concrete Pouring    | EIAR Chapter 4, 9<br><br>CEMP | <ul style="list-style-type: none"> <li>➤ Using weather forecasting to assist in planning large concrete pours and avoiding large pours where prolonged periods of heavy rain is forecast.</li> <li>➤ Restricting concrete pumps and machine buckets from slewing over watercourses (including drains and ditches) while placing concrete.</li> <li>➤ Ensuring that excavations are sufficiently dewatered before concreting begins and that dewatering continues while concrete sets.</li> <li>➤ Ensuring that covers are available, and used, when necessary, for freshly placed concrete to avoid the surface washing away in heavy rain.</li> <li>➤ The small volume of water that will be generated from washing of the concrete lorry's chute will be directed into a temporary lined impermeable containment area, or a Silbuster-type concrete wash unit or equivalent.</li> <li>➤ Disposing of any potential, small surplus of concrete after completion of a pour in suitable locations away from any watercourse or sensitive habitats.</li> </ul> |              |                 |
| MM21       | Watercourse Buffers | EIAR Chapter 4.               | <ul style="list-style-type: none"> <li>➤ There will be no direct discharges to any natural watercourses or land drains, with all drainage waters being dispersed as overland flows. All discharges from the</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |

| Ref. M no. | Reference Heading     | Reference Location                           | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Audit Result | Action Required |
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|            |                       | CEMP Section 3                               | <p>proposed works areas will be made over vegetation filters at an appropriate distance from natural watercourses and drains. Buffer zones of 50m around the existing natural drainage features have been used to inform the layout of the Proposed Project.</p> <p>➤ Buffered outfalls, which will be numerous over the Proposed Wind Farm site, will promote percolation of drainage waters across vegetation and close to the point at which the additional runoff is generated, rather than direct discharge to the existing drains of the Proposed Wind Farm site.</p>                                                                                                  |              |                 |
| MM22       | Water Discharge       | <p>EIAR Chapter 4.</p> <p>CEMP Section 3</p> | <p>➤ Apart from interceptor drains, which will convey clean runoff water to the downstream drainage system there will be no direct discharge (without treatment for sediment reduction, and attenuation for flow management) of runoff from the Site drainage into the existing site drainage network where possible. This will reduce the potential for any increased risk of downstream flooding or sediment transport/erosion.</p> <p>➤ Silt traps will be placed in the existing drains upgradient of where construction works / tree felling is taking place, and these will be diverted into proposed interceptor drains, or culverted under/across the works area</p> |              |                 |
| MM23       | Wastewater Management | EIAR Chapter 4                               | <p>➤ The construction compound will consist of temporary site offices, staff facilities and car-parking areas for staff and visitors.</p> <p>➤ Temporary port-a-loo toilets and toilets located within a staff portacabin will be used during the construction phase.</p> <p>➤ Wastewater from staff toilets will be directed to a sealed storage tank, with all wastewaters being tankered off site by permitted waste collector to wastewater treatment plants.</p> <p>➤ There will also be a water supply on site for hygiene purposes, by way of a temporary storage tank.</p>                                                                                           |              |                 |

| Ref. M no. | Reference Heading  | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Audit Result | Action Required |
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| MM24       | Drainage Swales    | ElAR Chapter 4<br>CEMP Section 3 | <ul style="list-style-type: none"> <li>➤ Drainage swales will be installed downgradient of any works areas to collect surface flow runoff where it might have come into contact with exposed surfaces and picked up silt and sediment. Swales will intercept the potentially silt-laden water from the excavations and construction areas of the Site and prevent it reaching natural watercourses.</li> </ul>                                                                                          |              |                 |
| MM25       | Interceptor Drains | ElAR Chapter 4<br>CEMP Section 3 | <ul style="list-style-type: none"> <li>➤ Interceptor drains will be installed up-gradient of all proposed infrastructure to collect clean surface runoff, in order to minimise the amount of runoff reaching areas where suspended sediment could become entrained. It will then be directed to areas where it can be re-distributed over the ground by means of a level spreader.</li> <li>➤ The interceptor drains will be installed in advance of any main construction works commencing.</li> </ul> |              |                 |
| MM26       | Check Dams         | ElAR Chapter 4<br>CEMP Section 3 | <ul style="list-style-type: none"> <li>➤ The velocity of flow in the interceptor drains and drainage swales, particularly on sloped sections of the channel, will be controlled by check dams, which will be installed at regular intervals along the drains to ensure flow in the swale is non-erosive.;</li> </ul>                                                                                                                                                                                    |              |                 |
| MM27       | Level Spreaders    | ElAR Chapter 4<br>CEMP Section 3 | <ul style="list-style-type: none"> <li>➤ A level spreader will be constructed at the end of each interceptor drain to convert concentrated flows in the drain into diffuse sheet flow on areas of vegetated ground. The levels spreaders will be located downgradient of any proposed works areas in locations where they are not likely to contribute further to water ingress to construction areas of the Site.</li> </ul>                                                                           |              |                 |
| MM28       | Piped Slope Drains | ElAR Chapter 4<br>CEMP Section 3 | <ul style="list-style-type: none"> <li>➤ Piped slope drains will be used to convey surface runoff from diversion drains safely down slopes to flat areas without causing erosion. Once the runoff reaches the flat areas it will</li> </ul>                                                                                                                                                                                                                                                             |              |                 |

| Ref. M no. | Reference Heading   | Reference Location                               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
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|            |                     |                                                  | be reconverted to diffuse sheet flow. Level spreaders will only be established on slopes of less than 6% in grade. Piped slope drains will be used to transfer water away from areas where slopes are too steep to use level spreaders;                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |
| MM29       | Vegetation Filters  | EIAR Chapter 4, Chapter 9.<br><br>CEMP Section 3 | ➤ Vegetation filters are the existing vegetated areas of land that will be used to accept surface water runoff from upgradient areas. The selection of suitable areas to use as vegetation filters will be determined by the size of the contributing catchment, slope and ground conditions;                                                                                                                                                                                                                                                                                                                                                                                                   |              |                 |
| MM30       | Settlement Ponds    | EIAR Chapter 4, Chapter 9.<br><br>CEMP Section 3 | ➤ Stilling ponds will be used to attenuate runoff from works areas of the Site during the construction phase and will remain in place to handle runoff from roads and hardstanding areas of the Proposed Project during the operational phase. The purpose of the stilling ponds is to intercept runoff potentially laden with sediment and to reduce the amount of sediment leaving the disturbed area by reducing runoff velocity. Reducing runoff velocity will allow larger particles to settle out in the stilling ponds, before the run-off water is redistributed as diffuse sheet flow in filter strips downgradient of any works areas.                                                |              |                 |
| MM31       | Dewatering Silt Bag | EIAR Chapter 4, Chapter 9<br><br>CEMP Section 3  | ➤ Dewatering silt bags allow the flow of water through them while trapping any silt or sediment suspended in the water. The silt bags provide a passive non-mechanical method of removing any remaining silt contained in the potentially silt-laden water collected from works areas within the Site.<br><br>➤ Dewatering silt bags are an additional drainage measure that can be used downgradient of the stilling ponds at the end of the drainage swale channels and will be located, wherever it is deemed appropriate, throughout the Site. The water will flow, via a pipe, from the stilling ponds into the silt bag. The silt bag will allow the water to flow through the geotextile |              |                 |

| Ref. M no. | Reference Heading        | Reference Location                                 | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Audit Result | Action Required |
|------------|--------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|
|            |                          |                                                    | fabric and will trap any of the finer silt and sediment remaining in the water after it has gone through the previous drainage measures. The dewatering silt bags will ensure that there will be no loss of silt into the stream.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |
| MM32       | Siltbuster               | EIAR Chapter 4<br>EIAR Chapter 9<br>CEMP Section 3 | <ul style="list-style-type: none"> <li>➤ Siltbusters or similar equivalent pieces of equipment will be available to filter any water pumped out of excavation areas if necessary, prior to its discharge to stilling ponds or swales. Siltbusters are mobile silt traps that can remove fine particles from water using a proven technology and hydraulic design in a rugged unit. They are specifically designed for use on construction sites.</li> <li>➤ The Siltbuster system comprises an electronic in-line dosing system which provides an accurate means of adding reagents, so overdosing cannot occur;</li> <li>➤ Continued monitoring and water analysis of pre and post treated water by means of an inhouse lab and dedicated staff, means the correct amount of chemical is added by the dosing system;</li> <li>➤ Dosing rates of chemical to initiate settlement is small, being in the order of 2-10 mg/L and the vast majority of the chemical is removed in the deposited sediment;</li> <li>➤ Final effluent not meeting the discharge criteria is recycled and retreated, which has a secondary positive effect of reducing carryover; and,</li> <li>➤ Use of biodegradable chemical agents can be used at very sensitive sites (i.e. adjacent to SACs).</li> </ul> |              |                 |
| MM33       | New Watercourse Crossing | EIAR Chapter 4, Chapter 9<br>CEMP Section 2        | <ul style="list-style-type: none"> <li>➤ The access road on the approach either side of the watercourse will be completed to a formation level which is suitable for the passing of plant and equipment required for the installation of each watercourse crossing.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |

| Ref. M no. | Reference Heading | Reference Location                          | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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|            |                   |                                             | <ul style="list-style-type: none"> <li>➤ All drainage measures along the proposed road will be installed in advance of the works.</li> <li>➤ A foundation base will be excavated to rock or competent ground with a mechanical excavator with the foundation formed in-situ using a semi-dry concrete lean mix. The base will be excavated along the stream bank with no instream works required.</li> <li>➤ Access to the opposite side of the watercourse for excavation and foundation installation will require the installation of a temporary pre-cast concrete or metal bridge across the watercourse to provide temporary access for the excavator. Plant and equipment will not be permitted to track across the watercourse.</li> <li>➤ Once the foundation base has been completed, the pre-cast concrete box culvert will be installed using a crane which will be set up on the bank of the watercourse and will be lifted into place from the bank with no contact with the watercourse.</li> <li>➤ Where the box culvert is installed in sections, the joints will be sealed to prevent granular material entering the watercourse,</li> <li>➤ Once the crossing is in position stone backfill will be placed and compacted against the structure up to the required level above the foundations.</li> </ul> |              |                 |
| MM34       | Silt Fences       | <p>EIAR Chapter 4</p> <p>CEMP Section 3</p> | <ul style="list-style-type: none"> <li>➤ Silt fences will be installed as an additional water protection measure around existing watercourses in certain locations, particularly where works are proposed within the 50-metre buffer zone of a stream. These areas include around existing culverts, around the headwaters of watercourses, and the proposed locations are indicated on the drainage design drawings included in Appendix 4-3.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                 |

| Ref. M no. | Reference Heading                                                                                            | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
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|            |                                                                                                              |                                  | <ul style="list-style-type: none"> <li>Silt fences will be installed as single, double or a series of triple silt fences, depending on the space available and the anticipated sediment loading. The silt fence designs follow the technical guidance document ‘<i>Control of Water Pollution from Linear Construction Projects</i>’ published by Construction Industry Research and Information Association (CIRIA, No. C648, 1996). Up to three silt fences may be deployed in series.</li> <li>All silt fencing will be formed using Terrastop Premium or equivalent silt fence product. Silt fences will be inspected regularly to ensure water is continuing to flow through the fabric, and the fence is not coming under strain from water backing up behind it.</li> </ul> |              |                 |
| MM35       | Sedimats                                                                                                     | EIAR Chapter 4                   | <ul style="list-style-type: none"> <li>Sediment entrapment mats, consisting of coir or jute matting, will be placed at the outlet of the silt bag to provide further treatment of the water outfall from the silt bag. Sedimats will be secured to the ground surface using stakes/pegs. The sedimat will extend to the full width of the outfall to ensure all water passes through this additional treatment measure.</li> </ul>                                                                                                                                                                                                                                                                                                                                                 |              |                 |
| MM36       | Oil Interceptors                                                                                             | EIAR Chapter 9<br>CEMP Section 4 | <ul style="list-style-type: none"> <li>Fuels stored on site will be minimised. Fuel storage areas if required will be bunded appropriately for the fuel storage volume for the time period of the construction and fitted with a storm drainage system and an appropriate oil interceptor</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |
| MM37       | Proposed Grid Connection underground cabling route – existing services, joint bays and watercourse crossings | EIAR Chapter 4<br>CEMP Section 2 | <ul style="list-style-type: none"> <li>Before works commence, updated surveying will take place along the proposed cable route, with all existing culverts and services identified. All relevant bodies i.e., ESBN, Galway County Council etc. will be contacted and all up to date information for all existing services sought.</li> <li>When the cable is located on public roads, a traffic management plan will be prepared prior to any works commencing. A road opening licence will be obtained where</li> </ul>                                                                                                                                                                                                                                                           |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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|            |                   |                    | <p>required and all plant operators and general operatives will be inducted and informed as to the location of any services.</p> <ul style="list-style-type: none"> <li>➤ A tracked 360-degree excavator will then proceed to dig out the proposed trench, typically to a depth of 1.2m, within which the ducts will be laid.</li> <li>➤ The cable ducts will be concrete surrounded where they pass under the public road and under drains or culverts.</li> <li>➤ Trench supports will be installed, or the trench sides will be benched or battered back where appropriate and any ingress of ground water will be removed from the trench using submersible pumps, fitted with appropriate silt filtration systems, to prevent contamination of any watercourse.</li> <li>➤ Once the trench has been excavated, a base-layer will be laid and compacted, comprising Clause 804, or 15 Newton CBM4 concrete as required.</li> <li>➤ The ducting will be installed as per specification, with couplers fitted and capped to prevent any dirt etc. entering the duct. In poor ground conditions, the ends of the ducts will be shimmed up from the bed of the trench, to prevent any possible ingress of water dirt. The shims will be removed again once the next length has been connected. Extreme care will be taken to ensure that all duct collars (both ends) are clean and in good condition prior to ducts being joined.</li> <li>➤ As the works progress, the as-built location of the ducting will be recorded using a total station or GPS.</li> <li>➤ As per the associated base-layer (Clause 804 material or 15 Newton CBM4 concrete) will be installed and compacted as per approved detail, with care not to displace the ducting.</li> <li>➤ Spacers will be used to ensure that the correct cover is achieved at both sides of the ducting.</li> <li>➤ The remainder of the trench will be backfilled in two compacted layers with approved engineer's specified material.</li> <li>➤ Yellow marker warning tape will be installed across the width of the trench, at 300mm depth,</li> </ul> |              |                 |

| Ref. M no. | Reference Heading                       | Reference Location                   | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Audit Result | Action Required |
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|            |                                         |                                      | <ul style="list-style-type: none"> <li>➤ The finished surface is to be reinstated, as per original specification. Off-road cabling may be finished with granular fill to facilitate access to the trench for any potential maintenance that is required during the operational phase of the Proposed Project.</li> <li>➤ Marker posts will then be placed at regular intervals (generally at joint bays and any change in direction) to denote the location of the underground cabling.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                 |
| MM38       | Turbine/Met Mast Foundation Excavations | EIAR Chapter 4<br><br>CEMP Section 2 | <ul style="list-style-type: none"> <li>➤ The extent of the excavation will be marked out and will include an allowance for trimming the sides of the excavation to provide a safe working area and slope batter;</li> <li>➤ Where practical, the soil will be stripped over the area of the excavation and stored locally for reuse, the subsoil will be excavated and stored to one side for reuse during the landscaping around the finished turbine;</li> <li>➤ No material will be removed from site with excavated spoil being transported and stored in the identified spoil management areas within the Site.</li> <li>➤ All groundwater and surface water arising from turbine base excavation will be pumped to the dirty water system prior to discharge from the works area;</li> <li>➤ Soil excavation shall be observed by a qualified archaeologist in accordance with a scheme of archaeological monitoring to identify any significant remains as they come to light;</li> <li>➤ The foundations excavation will be raised to formation level by compacted layers of well graded granular material will be spread and compacted to provide a hard area for the turbine/met mast foundation.</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Audit Result | Action Required |
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| MM39       | Spoil Management  | EIAR Chapter 4<br>CEMP Section 2 | <ul style="list-style-type: none"> <li>➤ Cohesive glacial tills considered unsuitable for reuse in the Proposed Project will require placement in a separate spoil repository area.</li> <li>➤ The spoil repository area has been identified in a location where the topography (slope angle &lt;5°), peat depth, resulting stability assessment (FoS of &gt;1.3 for 1m surcharge) and other environmental constraints (including 50m buffer from all watercourses) have allowed. This area is designated for permanently placing up to 1m of non-peat spoil material.</li> <li>➤ Side slopes of placed spoil material are to be no greater than 1(V):2(H).</li> <li>➤ Where possible, the surface of the placed spoil will be shaped to allow efficient surface water runoff from the spoil placement areas.</li> <li>➤ Silting ponds may be required at the repository area's lower side/outfall location.</li> <li>➤ Intermediate berms or buttresses of granular material may be installed within the spoil repository area to aid in the placement and stability of the spoil material. These berms will be shaped to align with the contours of the repository area.</li> </ul> |              |                 |
| MM40       | Peat Management   | EIAR Chapter 4<br>CEMP Section 2 | <ul style="list-style-type: none"> <li>➤ Peat repository areas (PRAs) have been identified at locations where the topography (slope angle &lt;5°), peat depth, resulting stability assessment (FoS of &gt;1.3 for 1m peat surcharge) and other environmental constraints (including 50m buffer from watercourses and 10m buffer from land drains) have allowed. These areas are designated for the permanent placement of</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Audit Result | Action Required |
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|            |                   |                    | <p>up to 1m of peat material. Typical details of each PRA are included in Appendix B.</p> <ul style="list-style-type: none"> <li>➤ A cell berm will be constructed similarly to the PRA details outlined in Appendix B. This cell berm will help to prevent the flow of saturated peat material. The stone cell berm will be constructed with a sufficiently coarse granular material or rock to enable the drainage of the placed peat material and prevent any instabilities within the repository area.</li> <li>➤ The stone cell berm will require a geotextile separator. The stone cell berm will be constructed using low-ground pressure machinery working from bog mats where necessary. The founding stratum for each stone buttress will be inspected and approved by a competent Geotechnical Engineer.</li> <li>➤ The height of the cell berm constructed will be greater than the height of the placed peat &amp; spoil to prevent any surface peat runoff. Berms up to a maximum of 1.25m in height will be required, subject to detailed design.</li> <li>➤ The cell berm is subject to the detail designer's specification; however, some peat excavation or installation of a shear key may be required to prevent instability of the stored material. The shear key will comprise an excavation below the existing ground level, beneath the cell berm to provide resistance against lateral forces. Where repositories are located on peat, the shear key must extend below the base of the in-situ peat.</li> </ul> |              |                 |

| Ref. M no.               | Reference Heading     | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Audit Result | Action Required |
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|                          |                       |                    | <ul style="list-style-type: none"> <li>➤ Where possible, the placed peat surface will be shaped to allow efficient runoff of surface water from the PRAs.</li> <li>➤ Silt ponds will be required at the repository area's lower side/outfall location.</li> <li>➤ Intermediate berms or buttresses of granular material may be installed within the PRA to aid in the placement and stability of the peat material. These berms will be shaped to align with the contours of the repository area.</li> <li>➤ The Contractor shall make every reasonable effort to promote vegetation growth in the PRAs following the placement of peat and completion of construction stage activities. Upper acrotelm layers shall be placed on the surface the right way up to promote vegetation growth. This growth will aid in stabilising the placed peat material and help in preventing it from becoming saturated following heavy periods of rain.</li> </ul> |              |                 |
| <b>Operational Phase</b> |                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |
| MM41                     | Electrical Substation | EIAR Chapter 4     | <ul style="list-style-type: none"> <li>➤ Periodic service and maintenance works which include some vehicle movement.</li> <li>➤ For operational and inspection purposes, substation access is required.</li> <li>➤ Servicing of the substation equipment will be carried out in accordance with the manufacturer's specifications, which would be expected to entail the following: <ul style="list-style-type: none"> <li>○ Six-month service – three-week visit</li> <li>○ Annual service – six-week visit</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                 |

| Ref. M no.                                    | Reference Heading    | Reference Location             | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Audit Result | Action Required |
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|                                               |                      |                                | ○ Weekly visits as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                 |
| <b>Decommissioning Phase</b>                  |                      |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |
| MM43                                          | Decommissioning Plan | EIAR Chapter 4                 | <ul style="list-style-type: none"> <li>➤ Prior to the end of the operational period the Decommissioning Plan (Appendix 4-5 of the EIAR) will be updated in line with decommissioning methodologies that may exist at the time and will agree with the competent authority at that time.</li> </ul>                                                                                                                                                                                                                               |              |                 |
| MM44                                          | Decommissioning Plan | EIAR Chapter 4<br>DP Section 2 | <ul style="list-style-type: none"> <li>➤ Upon decommissioning of the Proposed Wind Farm site, turbine and mast foundations will remain in place underground and will be covered with earth and reseeded with an appropriate seed mix to accelerate the resumption of natural drainage management.</li> <li>➤ The underground cable ducting within the Proposed Wind Farm site will be left in-situ as it is considered the most environmentally prudent option, avoiding unnecessary excavation and soil disturbance.</li> </ul> |              |                 |
| <b>Chapter 5: Population and Human Health</b> |                      |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |
| <b>Pre-Construction Phase</b>                 |                      |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |
| MM45                                          | Human Health         | EIAR Chapter 5                 | <ul style="list-style-type: none"> <li>➤ Prior to commencement of any works, the occupants of dwellings in the vicinity of the proposed works will be contacted and the scheduling of works will be made known. Local access to properties will also be maintained throughout any construction works and local residents will be supplied with the number of the works supervisor in order to ensure that disruption will be kept to a minimum.</li> </ul>                                                                       |              |                 |
| <b>Construction Phase</b>                     |                      |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |

| Ref. M no. | Reference Heading                   | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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| MM46       | Human Health<br>(Health and Safety) | EIAR Chapter 5<br>CEMP Section 5 | <p>The Proposed Project will be constructed, operated, and decommissioned in accordance with all relevant Health and Safety Legislation, including:</p> <ul style="list-style-type: none"> <li>➤ Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005);</li> <li>➤ Safety, Health and Welfare at Work (General Application) (Amendment) Regulations 2016 (S.I. No. 36 of 2016);</li> <li>➤ S.I. No. 528/2021 - Safety, Health and Welfare at Work (Construction) (Amendment) Regulations 2021 and</li> <li>➤ Safety, Health and Welfare at Work (Work at Height) Regulations 2006 (S.I. No. 318 of 2006).</li> </ul> <p>The mitigation measures presented below are also detailed in the Construction and Environment Management Plan (CEMP) (Appendix 4-5). Please refer to Chapter 18 Schedule of Mitigation and Monitoring Measures for a full list of measures.</p> <p>A Health and Safety Plan covering all aspects of the construction process will address the Health and Safety requirements in detail.</p> <p>All hazards will be identified, and risks assessed. Where elimination of the risk is not feasible, appropriate mitigation and/or control measures will be established. The contractor will be obliged under the construction contract and current health and safety legislation to adequately provide for all hazards and risks associated with the construction phase of the project. Safepass registration cards are required for all construction, delivery, and security staff. Construction operatives will hold a valid Construction Skills Certificate Scheme card where required. The developer is required to ensure a competent contractor is appointed to carry out the construction works. The contractor will be responsible for the implementation of procedures outlined in the Safety and Health Plan. Public safety will be addressed by restricting site access during construction. Fencing will be erected in areas of the site where uncontrolled access is not permitted.</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Audit Result | Action Required |
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|            |                   |                    | <p>Appropriate warning signs will be posted, directing all visitors to the site manager. Appropriate warning measures including ‘goalposts’ will be used as appropriate to prevent contact with any overhead lines that traverse the construction site.</p> <p>The scale and scope of the project requires that a Project Supervisor Design Process (PSDP) and Project Supervisor Construction Stage (PSCS) are required to be appointed in accordance with the provisions of the Health &amp; Safety Authority’s ‘<i>Guidelines on the Procurement, Design and Management Requirements of the Safety, Health and Welfare at Work (Construction) Regulations 2006</i>’.</p> <p>The PSDP appointed for the construction stage shall be required to perform his/her duties as prescribed in the Safety, Health and Welfare at Work (Construction) Regulations. These duties include (but are not limited to):</p> <ul style="list-style-type: none"> <li>➤ Identify hazards arising from the design or from the technical, organisational, planning or time related aspects of the project;</li> <li>➤ Where possible, eliminate the hazards or reduce the risks;</li> <li>➤ Communicate necessary control measures, design assumptions or remaining risks to the PSCS so they can be dealt with in the Safety and Health Plan;</li> <li>➤ Ensure that the work of designers is coordinated to ensure safety;</li> <li>➤ Organise co-operation between designers;</li> <li>➤ Prepare a written Safety and Health Plan;</li> <li>➤ Prepare a safety file for the completed structure and give it to the client; and</li> <li>➤ Notify the Authority and the client of non-compliance with any written directions issued.</li> </ul> |              |                 |

| Ref. M no. | Reference Heading                                | Reference Location                          | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|            |                                                  |                                             | <p>The PSCS appointed for the construction stage shall be required to perform his/her duties as prescribed in the Safety, Health and Welfare at Work (Construction) Regulations. These duties include (but are not limited to):</p> <ul style="list-style-type: none"> <li>➤ Development of the Safety and Health Plan for the construction stage with updating where required as work progresses;</li> <li>➤ Compile and develop safety file information</li> <li>➤ Reporting of accidents / incidents;</li> <li>➤ Weekly site meeting with PSCS;</li> <li>➤ Coordinate arrangements for checking the implementation of safe working procedures. Ensure that the following are being carried out:</li> <li>➤ Induction of all site staff including any new staff enlisted for the project from time to time;</li> <li>➤ Toolbox talks as necessary;</li> <li>➤ Maintenance of a file which lists personnel on site, their name, nationality, current Safe Pass number, current Construction Skills Certification Scheme (CSCS) card (where relevant) and induction date;</li> <li>➤ Report on site activities to include but not limited to information on accidents and incidents, disciplinary action taken and PPE compliance;</li> <li>➤ Monitor the compliance of contractors and others and take corrective action where necessary; and</li> <li>➤ Notify the Authority and the client of non-compliance with any written directions issued.</li> </ul> |              |                 |
| MM47       | Human Health<br>(Land Use Patterns & Activities) | <p>ELAR Chapter 5</p> <p>CEMP Section 5</p> | <ul style="list-style-type: none"> <li>➤ The construction of the Proposed Grid Connection through the public road network will be undertaken in a rolling construction method with 100m of road constructed and back filled each day</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |

| Ref. M no. | Reference Heading                 | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Audit Result | Action Required |
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|            |                                   |                                  | <p>providing access in the evenings and night hours along the Proposed Grid Connection.</p> <ul style="list-style-type: none"> <li>➤ A Traffic Management Plan, agreed with the Local Authority, will be in place for the construction phase of the grid route.</li> <li>➤ Local access for residents living along the grid route will not be closed for the construction phase as there are alternative access roads into the area.</li> <li>➤ Farm access into the Proposed Wind Farm site will be permitted as and when required.</li> </ul>                                                                                                                                                                                                                                                                        |              |                 |
| MM48       | Human Health<br>(Property Values) | EIAR Chapter 5<br>CEMP Section 5 | <ul style="list-style-type: none"> <li>➤ All mitigation relevant to property values, outlined above and the corresponding chapters: Chapter 10 Air, Chapter 12 Noise and Vibration, Chapter 14 Landscape, and Chapter 15 Material Assets, will be implemented in order to reduce insofar as possible, impacts on property values at properties located in the vicinity of Proposed Project construction works. Please refer to Chapter 18 Schedule of Mitigation and Monitoring Measures for a full list of measures</li> </ul>                                                                                                                                                                                                                                                                                        |              |                 |
| MM49       | Human Health<br>(Air Quality)     | EIAR Chapter 5<br>CEMP Section 5 | <ul style="list-style-type: none"> <li>➤ The majority of aggregate material for the construction of roads and turbine bases will be sourced from local quarries. Construction materials will be delivered to the Site via selected haul routes that will be determined based on the source of the construction material. In order to facilitate the construction of the Proposed Project, all crushed stone, hardcore materials and ready-mix concrete that will be required during the construction phase will be sourced from local, appropriately authorised quarries. For the purposes of assessment within the EIAR, quarries within a 20km range of the Proposed Wind Farm site that could potentially provide stone and concrete have been assessed and are illustrated on Figure 4-32. Truck wheels</li> </ul> |              |                 |

| Ref. M no. | Reference Heading                     | Reference Location                          | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|            |                                       |                                             | <p>will be washed to remove mud and dirt before leaving. All plant and materials vehicles shall be stored in the compound area or other dedicated areas. Areas of excavation will be kept to a minimum, and stockpiling will be minimised by coordinating excavation, spreading and compaction. Construction traffic will be restricted to defined routes and a speed limit will be implemented.</p> <p>➤ The active construction area along the Proposed Grid Connection Route will be small, ranging from 100-150m in length at any one time. Should separate crews be used during the construction phase they will generally be separated by 1-2km. All construction machinery will be maintained in good operational order while on-site, minimising any emissions that are likely to arise. Aggregate materials for the construction of the cabling route will be sourced locally to reduce the amount of emissions associated with vehicle movements. Potential dust emissions during the construction period will not be significant and will be relatively short-term in duration.</p> |              |                 |
| MM50       | Human Health<br>(Water Quality)       | <p>EIAR Chapter 5</p> <p>CEMP Section 5</p> | <p>➤ A bespoke drainage design which includes but is not limited to interceptor drains, check dams, swales and ponds, will be implemented at the Site.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                 |
| MM51       | Human Health<br>(Noise and Vibration) | <p>EIAR Chapter 5</p> <p>CEMP Section 5</p> | <p>➤ Keep local residents informed of the proposed working schedule, where appropriate, including the times and duration of any abnormally noisy activity that may cause concern;</p> <p>➤ All vehicles and mechanical plant will be fitted with effective exhaust silencers and be subject to programmed maintenance;</p> <p>➤ Select inherently quiet plant where appropriate - all major compressors will be 'sound reduced' models fitted with properly</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |

| Ref. M no. | Reference Heading                       | Reference Location                          | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
|------------|-----------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|
|            |                                         |                                             | <p>lined and sealed acoustic covers, which will be kept closed whenever the machines are in use;</p> <ul style="list-style-type: none"> <li>➤ All ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers;</li> <li>➤ Machines will be shut down between work periods (or when not in use) or throttled down to a minimum;</li> <li>➤ Regularly maintain all equipment used onsite, including maintenance related to noise emissions;</li> <li>➤ Vehicles will be loaded carefully to ensure minimal drop heights so as to minimise noise during this operation; and</li> <li>➤ All ancillary plant such as generators and pumps will be positioned so as to cause minimum noise disturbance and if necessary, temporary acoustic screens or enclosures will be provided.</li> </ul>                                                                                                                        |              |                 |
| MM52       | Human Health<br>(Traffic and Transport) | <p>EIAR Chapter 5</p> <p>CEMP Section 5</p> | <ul style="list-style-type: none"> <li>➤ a comprehensive set of mitigation measures will be put in place before and during the construction stage in order minimize the effects of the additional traffic generated by the Proposed Project. A detailed <b>Traffic Management Plan (TMP)</b>, incorporating all the mitigation measures included as Appendix 15-2 of this EIAR, will be finalised and confirmatory detailed provisions in respect of traffic management agreed with the road's authority and An Garda Síochána prior to construction works commencing on Site.</li> </ul> <p>In addition, the traffic management measures proposed for the following construction traffic scenarios are set out for the grid connection in Appendix 15-2: Traffic Management Plan for Cooloo Wind Farm Development;</p> <ul style="list-style-type: none"> <li>➤ Delivery of Abnormally sized loads,</li> <li>➤ Management of Standard HGVs on R332 leading to site,</li> </ul> |              |                 |

| Ref. M no. | Reference Heading                 | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Audit Result | Action Required |
|------------|-----------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|
|            |                                   |                                  | <ul style="list-style-type: none"> <li>➤ Traffic management measures during construction of cable grid connection</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |
| MM53       | Human Health<br>(Major Accidents) | EIAR Chapter 5<br>CEMP Section 5 | <ul style="list-style-type: none"> <li>➤ The Proposed Project is designed and will be constructed in line with current best practice and, as such, mitigation against the risk of major accidents and/or disasters will be embedded through the design. In accordance with the provision of the European Commission 'Guidance on the preparation of Environmental Impact Assessment Reports' 2017, a Risk Management Plan will be prepared and implemented on site to ensure an effective response to disasters or the risk of accidents. The plan will include sufficient preparedness and emergency planning measures.</li> <li>➤ Potential effects associated with contamination during construction, operation and decommissioning are addressed fully in Chapter 8 Land Soil and Geology and Chapter 9 Hydrology and Hydrogeology of this EIAR. The mitigation measures outlined therein to protect environmental receptors as well as the procedures and measures described in the Construction and Environmental Management Plan (CEMP) will ensure that the risk from these sources is low.</li> <li>➤ A CEMP has been prepared for the Proposed Project and is included in Appendix 4-3 of this EIAR. Upon a grant of planning permission for the Proposed Project, the CEMP will be updated prior to the commencement of the development. The CEMP will be a live document maintained by the contractor that will work to ensure that potential risks of major accident and/or disaster are identified, avoided and mitigated, as necessary. Refer to Appendix 4-3 for the CEMP that sets out the minimum standards to be employed by the contractor</li> </ul> |              |                 |

| Ref. M no.               | Reference Heading                   | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
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| <b>Operational Phase</b> |                                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |
| MM54                     | Population<br>(Residential Amenity) | EIAR Chapter 5     | <ul style="list-style-type: none"> <li>➤ There are no turbines proposed within 740m (4 x tip height) of any third-party receptors.</li> <li>➤ All mitigation as outlined under noise and vibration, dust, traffic, visual amenity and shadow flicker in this EIAR will be implemented in order to reduce insofar as possible impacts on residential amenity at properties located in the vicinity of the Proposed Project works, including along the proposed turbine and construction materials haul route and the Proposed Grid Connection</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |
| MM55                     | Human Health<br>(Health and Safety) | EIAR Chapter 5     | <ul style="list-style-type: none"> <li>➤ Access to the turbines is through a door at the base of the structure, which will be locked at all times outside maintenance visits. The doors will only be unlocked as required for entry by authorised personnel and will be locked again following their exit.</li> <li>➤ Staff associated with the project will conduct frequent visits, which will include inspections to establish whether any signs have been defaced, removed, faded, or are becoming hidden by vegetation or foliage, with prompt action taken as necessary.</li> <li>➤ Signs will also be erected at suitable locations across the Site as required for the ease and safety of operation of the wind farm. These signs include: <ul style="list-style-type: none"> <li>➤ Buried cable route markers at 50m (maximum) intervals and change of cable route direction;</li> <li>➤ Directions to relevant turbines at junctions;</li> <li>➤ “No access to Unauthorised Personnel” at appropriate locations;</li> <li>➤ Speed limits signs at Site entrance and junctions;</li> </ul> </li> </ul> |              |                 |

| Ref. M no. | Reference Heading               | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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|            |                                 |                    | <ul style="list-style-type: none"> <li>➤ “Warning these Premises are alarmed” at appropriate locations;</li> <li>➤ “Danger HV” at appropriate locations;</li> <li>➤ “Warning – Keep clear of structures during electrical storms, high winds or ice conditions” at Site entrance;</li> <li>➤ “No unauthorised vehicles beyond this point” at specific Site entrances; and</li> <li>➤ Other operational signage required as per Site-specific hazards.</li> <li>➤ An operational phase Health and Safety Plan will be developed to fully address identified Health and Safety issues associated with the operation of the Site. Access for emergency services will be available at all times.</li> <li>➤ The components of a wind turbine are designed to last up to 35 years and are equipped with a number of safety devices to ensure safe operation during their lifetime. During the operation of the wind farm regular maintenance of the turbines will be carried out by the turbine manufacturer or appointed service company. A project or task specific Health and Safety Plan will be developed for these works in accordance with the Site’s health and safety requirements</li> </ul> |              |                 |
| MM56       | Human Health<br>(Water Quality) | EIAR Chapter 5     | <ul style="list-style-type: none"> <li>➤ All surface water runoff from upgraded roads and new road surfaces (including hardstand and turbine base areas) will be captured and treated prior to discharge/release.</li> <li>➤ Settlement ponds, checks dams and buffered outfalls will prevent roads acting as preferential flowpaths by providing attenuation and water quality treatment.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |

| Ref. M no.                     | Reference Heading                                                                                                                   | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Audit Result | Action Required |
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| MM57                           | Human Health<br>(Traffic and Transport)                                                                                             | EIAR Chapter 5                   | <p>➤ The Proposed Project is designed and will be operated in line with current best practice and, as such, mitigation against the risk of major accidents and/or disasters will be embedded through the design. In accordance with the provision of the European Commission ‘Guidance on the preparation of Environmental Impact Assessment Reports’ 2017, a Risk Management Plan will be prepared and implemented on site to ensure an effective response to disasters or the risk of accidents. The plan will include sufficient preparedness and emergency planning measures.</p>                                                                                                                                                                                                                                                                                                                                                            |              |                 |
| <b>Chapter 6: Biodiversity</b> |                                                                                                                                     |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |
| <b>Construction Phase</b>      |                                                                                                                                     |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |
| MM58                           | Assessment of Potential Effects on Degraded raised bogs still capable of natural regeneration (7120) and Cutover Bog (PB4) Habitats | EIAR Chapter 6 Section 6.5.2.1.2 | <p><b>Direct habitat loss:</b></p> <p>Where direct impacts on peatland habitat will occur (proposed T5, the hardstand of T2, sections of the new site access track between T5 and T6 as well as sections of the proposed access track between T7 and T9, and the peat and spoil repository areas), mitigation measures as described below will be implemented to minimise the works area within the construction corridor project footprint.. This will avoid any loss of peatland habitat outside the Proposed Project Wind Farm footprint.</p> <p>Where excavation is required, such as at turbine T5 and T2 hardstands, all turves and sub-peat arising from the initial construction phase will be used to provide a layer of peatland vegetation on top of proposed peat repository areas in the site. This is described in the accompanying Biodiversity Management and Enhancement Plan (BMEP), provided in Appendix 6-4 of the EIAR.</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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|            |                   |                    | <p>Additionally, areas within the Proposed Project Wind Farm site classified as cutover bog (PB4) (either with current extraction activities or past extraction activities) which are recolonizing with scrub vegetation have been identified as potential enhancement areas. As detailed in Appendix 6-4, all current or ongoing extraction activities will cease, and all native scrub/broadleaved woodland species will be allowed to colonize this habitat area.</p> <p><b>Alteration of Surface Water Hydrochemistry (mitigation by design)</b></p> <p>Mitigation by design has been developed in relation to the proposed new access road between T7 and T9 will be a floating road design. This is described in Appendix 4-2 of Chapter 4 Description of the EIAR and described above. Floating roads over peat are proposed for areas where the peat stability assessment indicates that this construction method is suitable. Floating roads minimise impact on the peat, particularly peat hydrology, as there is no excavation required, and no subsequent peat arisings are generated. They also minimize the loss of habitat lost by reducing the alteration of flowpaths through the bog by drainage design within these habitat areas.</p> <p><b>Air Quality Impacts and Dust Emissions:</b></p> <p><b>Transport to and from site:</b></p> <p>The transport of turbine components, construction materials, waste and workers to and from the site will also give rise to exhaust emissions associated with the transport vehicles.</p> <p><b>Mitigation:</b></p> <ul style="list-style-type: none"> <li>➤ All construction vehicles and plant used onsite during the construction phase will be maintained in good operational order. If a vehicle requires repairs this work will be carried out</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Audit Result | Action Required |
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|            |                   |                    | <p>at an appropriate offsite location, thereby minimising any emissions that arise.</p> <ul style="list-style-type: none"> <li>➤ Turbines components will be transported to the Proposed Wind Farm on specified routes only (see Chapter 15 Material Assets), unless otherwise agreed with the Planning Authority.</li> <li>➤ All machinery and vehicles will be switched off when not in use and not left idling.</li> <li>➤ The majority of aggregate materials for the construction of the Proposed Project will be imported from off-site. This will significantly reduce the number of delivery vehicles accessing the Proposed Wind Farm, thereby reducing the amount of emissions associated with vehicle movements.</li> <li>➤ Deliveries of aggregate materials will be sourced from local quarries which will reduce the distance of these deliveries, thereby reducing the effect to traffic and transport in the wider area.</li> <li>➤ The Materials Recovery Facility (MRF) will be as close as possible to the Proposed Wind Farm and Proposed Grid Connection to reduce the amount of emissions associated with vehicle movements.</li> </ul> <p><b>Dust emissions:</b></p> <p>Turbines and Other Infrastructure:</p> <ul style="list-style-type: none"> <li>➤ A wheel wash facility will be installed on the Proposed Wind Farm site and will be used by vehicles before leaving the Site</li> <li>➤ Wetting of loose stone surface will be carried out during the construction phase to minimise movement of dust particles to the air. In periods of extended dry weather, dust suppression will be carried out along haul roads to ensure dust does not cause a nuisance. Water bowser movements will be carefully monitored to avoid increased runoff.</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ All plant and materials vehicles for the Proposed Project will be stored in dedicated areas within the Proposed Wind Farm.</li> <li>➤ Areas of excavation will be kept to a minimum, and stockpiling will be minimised by coordinating excavation, spreading and compaction.</li> <li>➤ Turbines and construction traffic will be transported to the Proposed Wind Farm on specified haul routes only.</li> <li>➤ The Proposed Grid Connection infrastructure will be transported to the Proposed Grid Connection on specified haul routes only.</li> <li>➤ Construction materials for the Proposed Project will be sourced locally from licenced quarries.</li> <li>➤ The agreed haul route road adjacent to the Proposed Wind Farm will be checked weekly by the Site Manager for cleanliness and cleaned as necessary.</li> <li>➤ The roads adjacent to the Proposed Wind Farm entrances will be checked weekly for damage/potholes and repaired as necessary.</li> <li>➤ The transportation of materials around the Proposed Wind Farm will be covered by tarpaulin or similar covered vehicles.</li> <li>➤ The transportation of construction materials from locally sourced quarries for the Proposed Grid Connection infrastructure and a small volume for the Proposed Wind Farm Site will be covered by tarpaulin.</li> <li>➤ In periods of extended dry weather, excavated material will be dampened prior to transport to the spoil management areas.</li> </ul> <p>Waste material will be transferred to a licensed/permitted Materials Recovery Facility (MRF) by an appropriately licensed waste contractor. The MRF facility will be local to the Proposed Project to reduce the amount of emissions associated with vehicle movements</p> |              |                 |

| Ref. M no. | Reference Heading                                                       | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
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| MM59       | Assessment of Potential Effects on Broadleaved Woodland (WD1)           | EIAR Chapter 6 Section 6.5.2.1.3 | <p>The existing conifer plantation woodland, consisting of a monoculture of Conifer Woodland (WD4) will be removed to accommodate replanting of native broadleaved woodland, as outlined below.</p> <p>It is proposed to replant approximately 11.5ha15ha of native broadleaved woodland consisting of a higher species diversity within the felled conifer woodland these areas, as well as between T3 and T5. The habitat area will also encompass the area currently consisting of conifer woodland (WD4) directly adjacent to the broadleaf plantation. This is described in the accompanying BMEP, provided in Appendix 6.4 of the EIAR.</p> <p>➤ The replanting measures will be monitored by a suitably qualified ecologist appointed by the wind farm operator over the lifetime of the Proposed Project as part of the BMEP to confirm their effectiveness and to allow for alteration in approaches where necessary.</p> |              |                 |
| MM60       | Assessment of Potential Effects on Hedgerows, Treelines and Stone Walls | EIAR Chapter 6 Section 6.5.2.1.4 | <p>In order to compensate for the loss of linear vegetation, approximately 4.7km of new replacement hedgerow planting will be carried out along selected boundaries of fields within the Proposed Wind Farm site and along any new or realigned access tracks. Additional replanting will also be planted in conjunction with the proposed fencing of rivers/drains from livestock poaching, as described in full within the BMEP found in Appendix 6-4.</p> <p>The replanting areas are presented in Figures 3-1 of the BMEP (Appendix 6-4), in consultation with the landowners who are supportive of the proposal. This will result in a net gain in this habitat within the Proposed Wind Farm site. Species planted in these locations will be of a similar composition to those occurring on site and will be of local provenance. Further details with regard to</p>                                                        |              |                 |

| Ref. M no. | Reference Heading                         | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
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|            |                                           |                                  | <p>species, planting location, and management is contained within the BMEP.</p> <ul style="list-style-type: none"> <li>➤ In addition, stone walls that have to be taken down will be re-instated where possible. Where stone walls are re-instated, they will be left to naturally re-colonise with vegetation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |
| MM61       | Assessment of Potential Effects on Badger | EIAR Chapter 6 Section 6.5.2.2.1 | <p>Following the surveys onsite and by taking a precautionary approach, it was determined that suitable habitat for badgers is present within the EIAR site boundaries and may use the Proposed Project Wind Farm site or the surrounding areas at least on occasion. The loss of potential supporting habitat has not been considered as significant at any scale and these habitats are widespread and common within the surrounding and wider landscape. Therefore, no mitigation is required for the loss of suitable badger habitats within the Proposed Project, however, there are scrub and grassland enhancement measures which will provide foraging habitat for badgers within the Proposed Wind Farm site. This is described in detail within the BMEP in Appendix 6-4.</p> <p>Prior to the commencement of construction works, the following measures will be undertaken for the avoidance of disturbance and/or direct mortality to badger and to ensure no additional setts have been established since the original surveys undertaken. The following measures are in line with <i>Guidelines For The Treatment Of Badgers Prior To The Construction Of National Road Schemes</i> (TII 2009).</p> <ul style="list-style-type: none"> <li>➤ From a precautionary basis, a pre-commencement badger survey will be undertaken by a qualified ecologist in accordance with standard best practice guidance prior to the commencement of site works to ensure that no additional setts in close proximity to proposed infrastructure have been built.</li> <li>➤ In the event that a badger sett is identified within or immediately adjacent to the Proposed Project footprint, mitigation measures will follow the <i>Guidelines For The Treatment Of Badgers Prior</i></li> </ul> |              |                 |

| Ref. M no. | Reference Heading                        | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Audit Result | Action Required |
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|            |                                          |                                  | <p><i>To The Construction Of National Road Schemes (TII 2009), and are summarized below:</i></p> <ul style="list-style-type: none"> <li>○ No heavy machinery should be used within 30m of badger setts</li> <li>○ Lighter machinery (generally wheeled vehicles) should not be used within 20m of a sett entrance</li> <li>○ Light work, such as digging by hand or scrub clearance should not take place within 10m of sett entrances.</li> </ul> <p>➤ During the breeding season (December to June inclusive), none of the above works should be undertaken within 50m of active setts nor blasting or pile driving within 150m of active setts.</p>                                                                                                                                                                                                                                                                                                                                                                    |              |                 |
| MM62       | Assessment of Potential Effects on Otter | EIAR Chapter 6 Section 6.5.2.2.2 | <p><b><u>Mitigation by Design:</u></b></p> <p>The Proposed Project layout has been designed so that the majority of the key infrastructure are located outside of the delineated 50m natural watercourse (river and stream) buffer zones. No in-stream excavation works are proposed, as all water crossings within the Proposed Wind Farm will involve clear span structures where new water crossings are required, and existing water crossings along the GCR Proposed Grid Connection within the public road will either involve HDD, standard formation crossings (above or below culvert) or clear span bridge structure (refer to <b>Error! Reference source not found.</b> in Section <b>Error! Reference source not found.</b>). Therefore, there will be no direct impact on any rivers or streams, and thus no potential barriers to migration for otter.</p> <p><b><u>Specific Mitigation:</u></b></p> <p><b>Water Quality Impacts resulting in Deterioration of Water Quality and Reduction of Prey:</b></p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Audit Result | Action Required |
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|            |                   |                    | <p>Specific mitigation is provided in relation to water quality in Chapter 9: 'Hydrology and Hydrogeology' of this EIAR and is assessed in Section <b>Error! Reference source not found.</b>above.</p> <p>A detailed drainage maintenance plan for the Proposed Project is provided in Section 4 of this EIAR. This plan provides full details of how water quality will be protected during the construction of the Proposed Project. In addition to this, specific mitigation is provided in relation to water quality in Chapter 9: 'Hydrology and Hydrogeology' of this EIAR. These mitigation measures will ensure that there will be no potential indirect effects on otter as a result of a deterioration in water quality.</p> <p><b>Disturbance:</b></p> <p>Prior to the commencement of construction works associated with the installation of watercourse crossings, the following measures will be undertaken for the avoidance of disturbance/displacement and direct mortality and to ensure that no otter holts/breeding sites have been established since the original surveys undertaken (TII, 2007):</p> <ul style="list-style-type: none"> <li>➤ From a precautionary basis, a pre-commencement otter survey will be undertaken in accordance with standard best practice guidance prior to the commencement of site works to ensure that current activity levels are confirmed prior to commencement of works. In the unlikely event that an otter holt is identified within or immediately adjacent to the Proposed Project footprint, consultation will be undertaken with the National Parks and Wildlife Service and a derogation licence applied for.</li> <li>➤ All conditions of a derogation licence will be implemented in full.</li> <li>➤ No works will be undertaken within 150m of any holts at which breeding females or cubs are present.</li> <li>➤ No wheeled or tracked vehicles (of any kind) will be used within 20m of active, but non-breeding, otter holts. Light work, such as</li> </ul> |              |                 |

| Ref. M no. | Reference Heading                                               | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|            |                                                                 |                                  | <p>digging by hand or scrub clearance will not take place within 15m of such holts, except under licence (TII, 2006<sup>1</sup>).</p> <p>➤ All of the above works will be undertaken or supervised by an appropriately qualified ecologist.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |
| MM63       | Assessment of Potential Effects on Pine Marten and Red Squirrel | EIAR Chapter 6 Section 6.5.2.2.3 | <p>Prior to the commencement of construction works, the following measures will be undertaken for the avoidance of disturbance and to ensure no dreys or dens have been established since the original surveys undertaken.</p> <p>➤ From a precautionary basis, a pre-commencement survey will be undertaken by a qualified ecologist in accordance with standard best practice guidance prior to the commencement of site works to ensure that no red squirrel dreys or pine marten dens are present within or in close proximity to the infrastructure footprint.</p> <p>➤ In the event that a red squirrel drey or pine marten den is identified within the Proposed Project footprint during pre-commencement surveys, further surveys will be undertaken to ascertain whether the drey/den is in use.</p> <p>➤ Consultation will be carried out with NPWS and a Species Protection Plan as agreed by the project ecologist and NPWS will be put in place in advance of felling works.</p> |              |                 |
| MM64       | Assessment of Potential Effects on Bats                         | EIAR Chapter 6 Section 6.5.2.2.4 | <p><b>Loss or damage to commuting and foraging habitat</b></p> <p>To comply with buffer requirements and minimise risk, linear vegetation within the turbine zones will be removed. The final extent of vegetation removal is estimated at 3.74km.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |

<sup>1</sup> NRA, 2006. *Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes*. Dublin: Transport Infrastructure Ireland. Available at: [www.tii.ie/tii-library/environment/construction-guidelines/Guidelines-for-the-Treatment-of-Otters-prior-to-the-Construction-of-National-Road-Schemes.pdf](http://www.tii.ie/tii-library/environment/construction-guidelines/Guidelines-for-the-Treatment-of-Otters-prior-to-the-Construction-of-National-Road-Schemes.pdf)

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Audit Result | Action Required |
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|            |                   |                    | <p>A habitat replacement strategy has been developed to offset this loss. This includes:</p> <ul style="list-style-type: none"> <li>➤ Approximately 4.7km of new linear planting will occur within the Proposed Wind Farm site.</li> <li>➤ This will result in a net gain of approximately 960m of hedgerow and treeline habitat;</li> <li>➤ Planting of native semi-mature trees to ensure immediate connectivity benefits;</li> <li>➤ Species selection and long-term management plans as detailed in the BMEP</li> </ul> <p>A Biodiversity Management and Enhancement Plan (BMEP) has been developed to mitigate the loss of bat foraging/commuting habitat associated with the Proposed Project and is presented in Appendix 6.4. The replanting design outlined in the BMEP will ensure habitat connectivity is maintained and enhanced around the Proposed Project. While no significant effects are anticipated as a result of the loss of habitats, linear features and woodland areas will be fully re-instated or enhanced by replanting of the hedgerows, treelines and woodland habitats.</p> <p><b>Loss of or Damage to Roosts</b></p> <p>Structure 6 proposed to be removed as part of the Proposed Project is not a confirmed roost. However, there is potential that bats may occupy this structure in the interim period prior to construction.</p> <p>Where the potential for indirect effects on bats potentially roosting within structures has been identified, the following mitigating procedures are proposed:</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ An inspection survey will be carried out prior to the commencement of the works to ensure no bats are roosting within the structure.</li> <li>➤ If any bats or signs of bat use are detected, appropriate mitigation – including potential exclusion under NPWS licence and provision of compensatory roosting habitat – will be implemented to ensure compliance with legal protections and avoid significant effects on bat populations.</li> <li>➤ Where evidence of bats is identified during the above pre-commencement surveys, a Derogation Licence will be required from NPWS for the continuation of the works.</li> </ul> <p>The recommendation of a pre-commencement survey does not present a lacuna in the survey assessment but is fully in line with best practice guidance. The function of this survey is to assess any potential changes in baseline environment since the surveys were undertaken.</p> <p>Additional bat roosting opportunities will be provided in the form of 20 bat boxes to provide potential additional roost resources to compensate for potential changes arising from the demolition of Structure 6. This is detailed in the BMEP found in Appendix 6-4.</p> <p><b>Displacement of Individuals or Populations</b></p> <p>The following construction best practice will be employed to minimise general noise and disturbance potential. During the construction phase, plant machinery will be turned off when not in use and all plant and equipment for use will comply with the Construction Plant and Equipment Permissible Noise Levels Regulations (S.I. No. 632 of 2001).</p> <p>Where lighting is required, directional lighting will be used to prevent overspill on to woodland/forestry edges and linear features. Exterior</p> |              |                 |

| Ref. M no. | Reference Heading                                   | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Audit Result | Action Required |
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|            |                                                     |                                  | <p>lighting, during construction and post construction, shall be designed to minimize light spillage, reducing the effect on surrounding habitat features and bat activity. Lighting will be directed away from mature trees and treelines around the periphery of the site boundary.</p> <p>Directional accessories will be used to direct light appropriately, such as light shields (Stone, 2013). All luminaires will be of a type that prevents upward and lateral spillage. The proposed lighting will comply with ILP Guidance Note 08/23 – Bats and Artificial Lighting in the UK (ILP, 2023)<sup>2</sup>.</p> <p>The proposed lighting around the site shall be designed in accordance with the Institute of Lighting Professionals Guidance Note 08/23 Bats and artificial lighting at Night. In addition, the applicant commits to the use of lights during construction (such that they are necessary) in line with the following guidance that is provided in the Dark Sky Ireland Lighting Recommendations:</p> <ul style="list-style-type: none"> <li>➤ Every light needs to be justifiable,</li> <li>➤ Limit the use of light to when it is needed,</li> <li>➤ Direct the light to where it is needed,</li> <li>➤ Reduce the light intensity to the minimum needed,</li> <li>➤ Use light spectra adapted to the environment,</li> <li>➤ When using white light, use sources with a “warm” colour temperature (less than 3000K).</li> </ul> |              |                 |
| MM65       | Assessment of Potential Effects on Marsh Fritillary | EIAR Chapter 6 Section 6.5.2.2.5 | <p><b>Mitigation by Design</b></p> <p>The Proposed Project was specifically designed to avoid all known records of Marsh Fritillary larval webs. Woodland replanting as a measure to offset the loss of woodland was originally proposed to be located within a field to</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |

<sup>2</sup> ILP (2023). Guidance Note 08/23: Bats and Artificial Lighting at Night. Institution of Lighting Professionals.

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Audit Result | Action Required |
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|            |                   |                    | <p>the west of the Proposed Wind Farm Site boundary, however larval webs were recorded here, and subsequently this area was removed from the project all together. Additionally, the singular larval web was initially recorded within a section of road north of T5. The road layout was subsequently redesigned to avoid the larval web.</p> <p>The BMEP (found in Appendix 6-4) outlines details for the habitat creation of approximately 15.96ha of habitat within the Proposed Wind Farm site boundaries that currently consists of wet grassland (GS4). These habitat areas have been identified as potentially providing suitable habitat for marsh fritillary within the Proposed Wind Farm Site.</p> <p>Additional measures to prevent any accidental loss or damage to known breeding habitat of marsh fritillary will involve the following:</p> <ul style="list-style-type: none"> <li>➤ The existing known marsh fritillary breeding areas will be fenced off with a minimum buffer of 5m. This is particularly important at the known location of a larval web, directly north of T5.</li> <li>➤ The construction works area for proposed turbine T5 and associated site access routes will be fully fenced off (with solid hoarding where possible) to ensure there is no access or egress to adjacent areas of sensitive habitat.</li> </ul> <p><b>Dust Mitigation</b></p> <p>The following mitigation applies to construction areas within 20m of recorded marsh fritillary larval webs (in line with Table 4 of Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction 2024<sup>3</sup>):</p> |              |                 |

<sup>3</sup> <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf>

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ Groundworks (i.e. works with potential to create dust) associated with proposed Turbine T05 and associated access road will be fully supervised by an ECoW.</li> <li>➤ The ECoW will regularly monitor adjacent marsh fritillary larval web areas on a daily basis for potential signs of dust deposition or any other habitat degradation. Dust level thresholds and weather will also be monitored in line with the mitigations set out in Section <b>Error! Reference source not found.</b> above.</li> <li>➤ If any signs of habitat degradation are noted, the dust-producing works will be immediately halted and further mitigation to protect larval web areas from dust will be implemented in advance of resuming work.</li> <li>➤ The ECoW will have power to halt construction works if required as outlined above.</li> <li>➤ All of the additional dust mitigation measures outlined in Chapter 10 Air Quality will apply.</li> </ul> <p><b>Mitigation - Loss of suitable breeding habitat</b></p> <p>Although no loss of suitable breeding habitat will be lost as a result of the Proposed Project, as part of the BMEP (Appendix 6-4) it is proposed to create 12.76ha of land managed for marsh fritillary within the Proposed Wind Farm site boundaries, as well as to enhance approximately 3.2ha of existing breeding marsh fritillary habitat within the EIAR site boundaries. These measures will not only enhance existing suitable habitat areas but will also result in a significant net gain in suitable marsh fritillary habitat within the Proposed Wind Farm site.</p> <p>Full details on habitat establishment and monitoring are provided in the BMEP (Appendix 6-4).</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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| MM66       | Biosecurity       | EIAR Chapter 6 Section 6.5.2.2.6 | <ul style="list-style-type: none"> <li>➤ A pre-commencement survey for invasive species within the footprint of the Proposed Grid Connection Route will be carried out by a suitably qualified ecologist to ensure there is no new growth of Third Schedule invasive species in these areas.</li> <li>➤ If additional invasive species are recorded within the construction areas, an Invasive Species Management Plan will be prepared in advance of construction which will incorporate the measures necessary to prevent spread additional to the measures laid out below.</li> <li>➤ A Toolbox Talk will be given by the Environmental Clerk of Works or Ecological Clerk of Works in relation to the management of invasive species within construction areas.</li> <li>➤ The infested area will be demarcated and works in the vicinity of the infestation will only be carried out under supervision by a suitably qualified Ecological Clerk of Works or Environmental Clerk of Works.</li> <li>➤ The infestation will be roped off from the public road network with clear signage identifying the presence of invasive species and instructing site operators to stay out of this area. This will be in place for the duration of the underground cabling works associated with the Proposed Grid Connection Route.</li> </ul> <p>In order to avoid the potential for spread of invasive species into the Proposed Project:</p> <ul style="list-style-type: none"> <li>➤ Any construction material imported into the Proposed Project Site will come from a source confirmed to be free of invasive species.</li> </ul> |              |                 |

| Ref. M no.               | Reference Heading                                                                                         | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
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|                          |                                                                                                           |                                  | All plant and machinery will be thoroughly cleaned before entering and exiting the Proposed Project Site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |
| <b>Operational Phase</b> |                                                                                                           |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                 |
| MM67                     | Assessment of Potential Effects on Groundwater, Surface Watercourses and Sensitive Aquatic Faunal Species | EIAR Chapter 6 Section 6.5.3.1.1 | <p><b>Removal of Vegetation Cover and Progressive Replacement of Natural Surface with Low Permeability Surfaces</b></p> <p>The operational phase drainage system of the Proposed Project will be installed and constructed in conjunction with the road and hardstanding construction work as described below and as shown on the drainage drawings (<b>Appendix 4-43</b>) submitted with this planning application:</p> <ul style="list-style-type: none"> <li>➤ Interceptor drains will be maintained up-gradient of all proposed infrastructure to collect clean surface runoff, in order to minimise the amount of runoff reaching areas where suspended sediment could become entrained. It will then be directed to areas where it will be re-distributed over the ground by means of a level spreader;</li> <li>➤ Swales/road side drains will be used to collect runoff from access roads and turbine hardstanding areas of the site, likely to have entrained suspended sediment, and channel it to settlement ponds for sediment settling;</li> <li>➤ On steep sections of access road transverse drains ('grips') will be constructed in the surface layer of the road to divert any runoff off the road into swales/road side drains;</li> <li>➤ Check dams will be used along sections of access road drains to intercept silts at source. Check dams will be constructed from a 4/40mm non-friable crushed rock;</li> <li>➤ Settlement ponds, emplaced downstream of road swale sections and at turbine locations, will buffer volumes of runoff discharging from the drainage system during periods of high rainfall, by</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
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|            |                   |                    | <p>retaining water until the storm hydrograph has receded, thus reducing the hydraulic loading to watercourses; and, Settlement ponds will be designed in consideration of the greenfield runoff rate.</p> <p>These measures will ensure all surface water runoff from upgraded roads and new road surfaces (including hardstands and turbine base areas) will be captured and treated prior to discharge/release. Settlement ponds, check dams and buffered outfalls will prevent roads acting as preferential flowpaths by providing attenuation and water quality treatment.</p> <p><b>Runoff Resulting in Suspended Solids Entrainment in Surface Waters</b></p> <p>The mitigation measures outlined in Sections 9.5.2.3 &amp; 9.5.3.1 of Chapter 9 will ensure all surface water runoff from upgraded roads and new road surfaces (including hardstand and turbine base areas) will be captured and treated prior to discharge/release. Settlement ponds, checks dams and buffered outfalls will prevent roads acting as preferential flowpaths by providing attenuation and water quality treatment.</p> <p><b>Oils, fuels and/or hydrocarbon spills</b></p> <ul style="list-style-type: none"> <li>➤ During the operational phase of the Proposed Project, the only regular plant which will be required on site will be maintenance/inspection vehicles (jeeps/vans/quads) and these will not be refuelled on-site.</li> <li>➤ Any hydrocarbons (oil) present within the turbine generator and gear box will be enclosed within a bund with 110% capacity.</li> <li>➤ There will be no storage of fuels, oils and chemicals inside any of the turbines.</li> <li>➤ Automated oil leak detectors will be placed in each of the turbines which will allow early detection of even the smallest leaks of oil or hydraulic fluid that may arise from components such as the transformer or gearbox.</li> </ul> |              |                 |

| Ref. M no.      | Reference Heading                                        | Reference Location               | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Audit Result | Action Required |
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|                 |                                                          |                                  | <p>➤ Automated oil leak detectors will be placed in each of the turbines which will allow early detection of even the smallest leaks of oil or hydraulic fluid that may arise from components such as the transformer or gearbox.</p> <p>The automated detection system will then rapidly notify the wind farm operator by cloud-based systems. This early detection system will prevent large leaks of oil or hydraulic fluid.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |
| MM68            | Assessment of Potential Effects on Bats during operation | EIAR Chapter 6 Section 6.5.3.2.1 | <p>Detailed mitigation measures have been provided within the Bat Report, found in Appendix 6-2, and have been summarized below.</p> <p><b>Mitigation measures are proposed together with post-construction monitoring:</b></p> <ul style="list-style-type: none"> <li>➤ Manage felling buffers around turbines</li> <li>➤ Implement blade feathering as a standard</li> <li>➤ Any proposed lighting around the site shall be designed in accordance with the Institute of Lighting Professionals Guidance Note 08/23 Bats and artificial lighting at night (ILP, 2023).</li> <li>➤ Implement curtailment on proposed turbines which recorded high median activity levels, as per Table 6-1 of the Bat Report, in Appendix 6-2.</li> <li>➤ A minimum of three years operational monitoring to assess changes in bat activity patterns post construction and to monitor the implementation of the mitigation strategy.</li> </ul> <p>Adaptive mitigation strategy based on the results of the postconstruction monitoring</p> |              |                 |
| Chapter 7 Birds |                                                          |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |

| Ref. M no.                     | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Audit Result | Action Required |
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| <b>Pre- Construction Phase</b> |                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |
| MM69                           | Birds             | EIAR Chapter 7     | <p>The project design has followed the basic principles outlined below to avoid the potential for significant effects on avian receptors:</p> <ul style="list-style-type: none"> <li>➤ The turbine layout has been designed to avoid siting turbines in proximity to Horseleap Lough, which is utilised by many bird species. The nearest turbine is over 800m from the wetland. This avoids habitat loss, ameliorates disturbance during construction and displacement during operation, and reduces the potential for collisions as birds fly to and from the Lough.</li> <li>➤ The turbine layout has been designed to avoid siting turbines in proximity to the regularly used hen harrier roost at Cloonboo More. The nearest turbine is over 700m from the section of bog habitat in which hen harrier are roosting. This avoids habitat loss at the bog, ameliorates disturbance during construction and displacement during operation, and reduces the potential for collisions as hen harrier enter and leave the roost. This also benefits merlin, which has been observed roosting communally with hen harrier</li> <li>➤ Hard standing areas have been designed to the minimum size necessary to accommodate the turbine model that is selected, reducing the footprint of the development.</li> <li>➤ The Proposed Grid Connection route has been selected to utilise built infrastructure for the majority of</li> </ul> |              |                 |

| Ref. M no.                | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|                           |                   |                    | <p>its length (i.e. cables to be laid within public roads). Cables will be laid underground to avoid effects on roadside hedgerows and disturbance to nesting birds.</p> <p>➤ A pre-construction bird survey at the Proposed Wind Farm site will be organised to ensure that any sensitive roost or nest sites in the works area are identified and disturbance to these are avoided. Further details are provided in Appendix 7-8.</p>                                                                                                                                                                                                                                                                                                                                                                        |              |                 |
| <b>Construction Phase</b> |                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |
| MM70                      | Birds             | ELAR Chapter 7     | <p>➤ Works will commence outside the bird nesting season (1st of March to 31st of August inclusive).</p> <p>➤ The removal of woody vegetation will be undertaken in full compliance with Section 40 of the Wildlife Act 1976 – 2022. Where sections of woody vegetation are removed for the purposes of the junction and road upgrades, these will be replaced with suitable hedge/tree species which are common in the local context.</p> <p>➤ Noise limits, noise control measures, hours of operation (i.e. dusk and dawn is high faunal activity time) and selection of plant items will be considered in relation to disturbance of birds. All plant and equipment for use will comply with the European Communities (Noise Emission By Equipment For Use Outdoors) Regulations, 2001, as amended (SI</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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|            |                   |                    | <p>632/2001). Plant machinery will also be turned off when not in use.</p> <ul style="list-style-type: none"> <li>➤ Silt fences will be installed as an additional water protection measure around existing waterbodies.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |
| MM71       | Birds             | EIAR Chapter 7     | <ul style="list-style-type: none"> <li>➤ If winter roosting or breeding activity of raptors of high conservation concern is identified, no works shall be undertaken within a species-specific disturbance buffer of the roost/nest, in line with industry best practice (e.g., Goodship and Furness, 2022). No works shall be permitted within the buffer until it can be demonstrated that the roost/nest is no longer occupied.</li> <li>➤ Works in proximity to Horseleap Lough will be conducted outside the lapwing breeding season. The preferred month for works in proximity to Horseleap Lough is late-August and September.</li> <li>➤ During works adjacent to Horseleap Lough, temporary screening or hoarding will be erected between the works and the Lough. This should be high and wide enough to screen birds within the Lough from the majority of disturbances (e.g., moving people or machinery and lights). Screening should be removed immediately when works adjacent to the Lough are complete.</li> <li>➤ A pre-demolition survey of the derelict structure at BO-1 will be organised to check if barn owl is currently using the building.</li> </ul> |              |                 |

| Ref. M no.               | Reference Heading        | Reference Location             | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Audit Result | Action Required |
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|                          |                          |                                | <ul style="list-style-type: none"> <li>➤ A pre-felling survey of the trees at LE-1 will be organised to check that long-eared owl are not currently nesting within the trees.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |
| <b>Operational Phase</b> |                          |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |
| MM72                     | Birds<br>(Golden Plover) | ELAR Chapter 7<br>Appendix 7-7 | <ul style="list-style-type: none"> <li>➤ As the significance of the predicted collision risk for golden plover is high, a Bird Mitigation Plan with the objective to reduce the significance of the effect of collision risk for golden plover has been prepared. This is fully described in Appendix 7-7. Following successful implementation of the mitigation plan, no significant effects of collision risk are anticipated</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |
| MM73                     | Birds<br>(Barn Owl)      | ELAR Chapter 7<br>Appendix 7-7 | <ul style="list-style-type: none"> <li>➤ During field surveys, barn owl were recorded using a derelict building in the Proposed Wind Farm site. Although the significance of the effect of the removal of this building was assessed to be Very Low, enhancement measures with the objective of providing roosting structures for barn owl in this area will be included at the Proposed Wind Farm.</li> <li>➤ A barn owl box will be erected at Cooloo, close to the location of the derelict building that will be removed. This location will be a minimum of 100m from the nearest proposed turbine location, as disturbance of barn owl up to 100m during the breeding season, and up to 50m during the winter season has been reported by Goodship and Furnace (2022). The materials and design of the box will conform with the standards of the Barn Owl Trust. The box will be erected following</li> </ul> |              |                 |

| Ref. M no.                   | Reference Heading             | Reference Location             | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Audit Result | Action Required |
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|                              |                               |                                | guidance from the Barn Owl Trust (i.e., 3m+ from the ground, access hole avoiding the prevailing weather).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |
| MM74                         | Birds<br>(Bird Control Kites) | EIAR Chapter 7<br>Appendix 7-7 | ➤ The bird control kites will be imitations of raptor birds (e.g. hawks, falcons) and attached to a tether approximately 8m in length, in turn attached to a pole approximately 10m in length, that is secured to the ground near the centre of the field to maximise the effect. This will create weaving and hovering movements akin to hunting raptor birds c. 2-18m above the ground and will be suitable for a range of wind speeds (O'Shea et al., 2020). This representation of a hunting predator will provide a deterrent to golden plover landing in the field. Bird control kites are widely used to deter birds from crops, businesses and gardens and have been shown to reduce the number of birds present in agricultural fields (O'Shea et al., 2020). |              |                 |
| MM75                         | Birds<br>(Timeframe)          | EIAR Chapter 7<br>Appendix 7-7 | ➤ It is proposed to apply mitigation measures during the wintering period as this was the key collision risk period for golden plover. Surveys conducted in the study area between September 2019 and March 2025 indicate that wintering golden plover numbers of County Importance most often occurred within 500m of the turbines between the months of October and March. Over all winters combined, wintering golden plover were first observed in October and were recorded through the winter until March, after which there was a notable decrease in April. Thus, mitigation measures will be in effect between 1 <sup>st</sup> October and 31 <sup>st</sup> March each year of operation                                                                      |              |                 |
| <b>Decommissioning Phase</b> |                               |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |
| MM76                         | Birds                         | EIAR Chapter 7                 | ➤ It is proposed that decommissioning works will commence outside the bird nesting season (1st of March to 31st of August inclusive) to avoid the most sensitive time of the year for most bird species with the potential to use the site and its environs. Pre-commencement surveys                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |

| Ref. M no.                                     | Reference Heading                    | Reference Location                | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Audit Result | Action Required |
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|                                                |                                      |                                   | <p>will be undertaken within one month prior to the initiation of works. The purpose of these surveys is to identify sensitive roosting sites.</p> <p>➤ If works run into the subsequent breeding season(s) (April-September), surveys will be conducted to identify sensitive nesting sites. Breeding season surveys will be conducted once per month from April to July inclusive when works are taking place. If works run into the subsequent winter season(s) (October to March), surveys will be repeated to identify sensitive roost sites. These surveys will be conducted at the beginning of each winter season (e.g., October)</p>                                                                 |              |                 |
| <b>EIAR Chapter 8 Land Soils &amp; Geology</b> |                                      |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |
| <b>Construction Phase</b>                      |                                      |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |
| MM77                                           | Peat, Subsoil and Bedrock Excavation | EIAR Chapter 4, 8<br>Appendix 4-2 | <p><u>Proposed Wind Farm site</u></p> <ul style="list-style-type: none"> <li>➤ Placement of turbines and associated infrastructure in areas with shallower peat where possible;</li> <li>➤ Use of floating roads, where appropriate, to reduce peat excavation volumes;</li> <li>➤ The peat and subsoil which will be removed during the construction phase will be localised to the wind farm infrastructure turbine location, substation and temporary compounds and access roads; and,</li> <li>➤ Construction of settlement ponds will be volume neutral, and all excess material will be used locally to form pond bunds and surrounding landscaping.</li> </ul> <p><u>Proposed Grid Connection:</u></p> |              |                 |

| Ref. M no. | Reference Heading                                               | Reference Location                    | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
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|            |                                                                 |                                       | <ul style="list-style-type: none"> <li>Any overburden excavated from the cable trench will be transported to the peat and spoil management areas; and,</li> <li>Some excess spoil material or pavements materials containing tar generated during the cable route construction will be transported by permitted waste contractors to a suitable permitted/licensed site for disposal/recovery.</li> </ul>                                                                                                                                                                                                                                                                                                                          |              |                 |
| MM78       | Erosion of Exposed Peat, Soils and Subsoils During Construction | Chapter 8                             | <ul style="list-style-type: none"> <li>The upper vegetative layer (where still present) of excavated peat will be stored with the vegetation part of the sod facing the right way up to encourage growth of plants and vegetation at the surface of the stored peat within the peat storage areas;</li> <li>Re-seeding and spreading/planting will also be carried out in these areas;</li> <li>Brash/bog mats will be put in place to support vehicles on soft ground, reducing peat and mineral soils erosion and avoiding the formation of rutted areas, in which surface water ponding can occur; and,</li> <li>A full Peat and Spoil Management Plan for the development is included as Appendix 4-2 of this EIAR.</li> </ul> |              |                 |
| MM79       | Contamination of Soil by Leakages and Spillages of Hydrocarbons | EIAR Chapter 4, 8<br><br>Appendix 4-5 | <ul style="list-style-type: none"> <li>On-site re-fuelling will be undertaken using a fuel truck with spill kits kept on site for accidental leakages or spillages;</li> <li>Only designated trained operatives will be authorised to refuel plant on-site;</li> <li>Taps, nozzles or valves associated with refuelling equipment will be fitted with a lock system;</li> </ul>                                                                                                                                                                                                                                                                                                                                                    |              |                 |

| Ref. M no. | Reference Heading            | Reference Location                        | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Audit Result | Action Required |
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|            |                              |                                           | <ul style="list-style-type: none"> <li>➤ All fuel storage areas will be bunded appropriately for the duration of the construction phase. All bunded areas will be fitted with a storm drainage system and an appropriate oil interceptor. Ancillary equipment such as hoses, pipes will be contained within the bunded area;</li> <li>➤ Fuel, oil and chemical stores including tanks and drums will be regularly inspected for leaks and signs of damage;</li> <li>➤ The electrical control building (at the substation) will be bunded appropriately to the volume of oils likely to be stored and to prevent leakage of any associated chemicals to groundwater or surface water. The bunded area will be fitted with a storm drainage system and an appropriate oil interceptor;</li> <li>➤ The plant used during construction will be regularly inspected for leaks and fitness for purpose;</li> <li>➤ Safety data sheets for all chemicals used will be kept on-site; and,</li> <li>➤ An emergency response plan for the construction phase to deal with accidental spillages is contained within the Construction and Environmental Management Plan (which is contained in Appendix 4-5).</li> </ul> |              |                 |
| MM80       | Peat Instability and Failure | <p>EIAR Chapter 8</p> <p>Appendix 8-1</p> | <p>The following control measures incorporated into the construction phase of the Proposed Project will ensure the management of the risks for this site:</p> <ul style="list-style-type: none"> <li>➤ Appointment of experienced and competent contractors and detailed designers;</li> <li>➤ The construction works on site will be supervised by experienced and qualified personnel;</li> <li>➤ Allocate sufficient time for the project to be constructed safely with all peat stability mitigation measures included in the programme;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ Set up, maintain and report findings from monitoring systems, including sightline monitoring;</li> <li>➤ Maintain vigilance and awareness through Tool-Box-Talks (TBTs) on peat stability;</li> <li>➤ Prevent undercutting of slopes and unsupported excavations;</li> <li>➤ Prevent placement of loads/overburden on marginal ground;</li> <li>➤ Manage and maintain a robust drainage system. This will be the responsibility of the appointed contractor and their designer;</li> <li>➤ Storage of peat material, including temporary and side casting be carried out in the permitted areas only;</li> <li>➤ Acrotelm (upper) peat material may be used as landscaping material where topography allows and the detailed designer has assessed the stability risk;</li> <li>➤ Uncontrolled placement of peat or loading of peat material must be avoided;</li> <li>➤ Water flows within the drainage systems will be controlled. Velocities of slows must be controlled using check dams within drainage systems and the uncontrolled release of water onto slopes can create a landslide risk and must be avoided;</li> <li>➤ All construction requiring cut and fill earthworks required a robust monitoring and inspection programme. The details of this inspection programme will depend on the purpose and methodologies of the works and the ground conditions;</li> <li>➤ A risk assessment and method statement (RAMS), which considers the potential causes and mitigations of peat instabilities and landslides is required and must be regularly communicated to all site staff. An observational approach by all site staff to the ground conditions and the risks should be promoted, and any changes in the ground or site conditions should be reported and the risk dynamically assessed; and,</li> <li>➤ The design and construction teams will develop their own inspection and testing criteria to satisfy and de-risk the possibility of peat landslides.</li> </ul> |              |                 |

| Ref. M no. | Reference Heading                               | Reference Location                    | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Audit Result | Action Required |
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| MM81       | Biodiversity Management Enhancement Plan (BMEP) | EIAR Chapter 6, 8<br><br>Appendix 6-4 | <p>➤ A site-specific monitoring and evaluation programme will be implemented to ensure that the success of the proposed measures remains long-term. It will also assist in situations where the habitat establishment may not have been successful by providing evidence of shortcomings, allowing a revised management plan to be formulated.</p> <p>➤ Monitoring results will be reported by the Project Ecologist within an Annual Environmental Report. Reports detailing the monitoring works carried out, the results obtained and a review of their success, along with any suggestions for amendments to the plan will be prepared. The enhancement plan will be updated and amended where required to improve the efficacy of the enhancement work.</p>                                                              |              |                 |
| MM82       | Karst Related Ground Instability                | EIAR Chapter 8<br><br>Appendix 8-2    | <p>Proposed Mitigation Measures:<br/>Mitigation measures for karst related ground instability are shown in Section 6 of the Geotechnical karst Risk Assessment (GDG, 2025) (Appendix 8-2). The measures are summarised below.</p> <p><u>Mitigation by Avoidance:</u></p> <p>All Proposed Project infrastructure has been sited to avoid very high-risk karst features. No karst features have been identified to underly Proposed Project infrastructure locations.</p> <p><u>Mitigation by Design:</u></p> <p><i>Detailed Design Phase Investigations:</i></p> <p>To reduce the potential risk of encountering unexpected karstic features within the Proposed Wind Farm footprint, additional ground investigations will be carried out during the post consent detailed design phase.</p> <p><i>Piled Foundations:</i></p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
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|            |                   |                    | <p>Where small-scale dissolution and voiding are encountered at turbine foundations during detailed ground investigation, one potential mitigation strategy is the use of drilled or grouted piles. The use of piles transfers structural loads to competent rock beneath karst-affected zones. This approach bypasses voids and weak soils, reducing the risk of differential settlement or collapse.</p> <p><i>Rock Infill:</i></p> <p>This methodology involves ‘choking’ the throat of the sinkhole with coarse granular fill, and progressive backfilling upwards with progressively finer granular fill. All backfill is to be placed in layers 150mm deep and compacted. Soil around the sinkhole is to be excavated to a radius of 3-5m, before being replaced and compacted with or without incorporation of anchored geogrid.</p> <p><i>Grouting:</i></p> <p>Pressure grouting can be employed to stiffen soil over limestone and prevent its movement into fissures, to fill localised fissures, and to stabilise fractured rock. It is worth noting that the injection of a fluid grout can result in significant losses into adjacent caves before sealing karstic fissures. The detailed designer/contractor shall consider which grouting method would be most appropriate and the potential negative consequences for contamination and pollution of the aquifer.</p> <p><i>Binding Layers and Geo-grids:</i></p> <p>One of the most effective and widely adopted engineering solutions to mitigate the risks of unacceptable settlement and unexpected collapse at access tracks is the use of bridging layers reinforced with geogrids.</p> <p>Bridging layers are designed to span across potential voids or weak zones, redistributing loads and preventing localised collapse. When combined with geogrid reinforcement, these layers gain enhanced tensile strength and load-spreading capacity, allowing them to maintain structural integrity even in the event of subsurface failure.</p> |              |                 |

| Ref. M no.               | Reference Heading            | Reference Location                | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Audit Result | Action Required |
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|                          |                              |                                   | <p><i>Drainage Control:</i></p> <p>Surface and subsurface drainage systems will be designed to prevent water ingress into karst features, reducing the potential for solutional enlargement and subsidence. This includes the installation of sub-drainage systems, the use of impermeable liners or membranes, and pumping and dewatering during construction.</p> <p>As described in the Water Chapter (Chapter 9), all Proposed Wind Farm surface water drainage outfalls at level spreaders will be placed outside the 30m potential karst feature buffer zones.</p> |              |                 |
| MM83                     | Turbine Delivery Route Works | EIAR Chapter 8                    | <ul style="list-style-type: none"> <li>➤ All works are minor and localised and cover very small areas;</li> <li>➤ These works are distributed over a wide area;</li> <li>➤ All works are temporary in nature; and,</li> <li>➤ Oils and fuels will be managed as per MM3</li> </ul>                                                                                                                                                                                                                                                                                       |              |                 |
| <b>Operational Phase</b> |                              |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |
| MM84                     | Site Road Maintenance        | EIAR Chapter 8                    | <ul style="list-style-type: none"> <li>➤ Use of aggregate from authorised quarries for use in road and hardstand maintenance.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |
| MM85                     | Site Vehicle/Plant Use       | EIAR Chapter 4, 8<br>Appendix 4-5 | <ul style="list-style-type: none"> <li>➤ Vehicles used during the operational phase will be refuelled off site before entering the Site;</li> <li>➤ No fuels will be stored on-site during the operational phase; and</li> <li>➤ Spill kits will be available in all site vehicles to deal with an accidental spillage and breakdowns; and, <ul style="list-style-type: none"> <li>➤ An emergency plan for the operational phase to deal with accidental spillages and breakdowns will be contained in the CEMP (Appendix 4-5).</li> </ul> </li> </ul>                   |              |                 |
| MM86                     | Use of Oil In Transformers   | EIAR Chapter 4, 8<br>Appendix 4-5 | <ul style="list-style-type: none"> <li>➤ All transformers and substation areas will be bunded to 110% of the volume of oil used in each transformer/substation; and,</li> </ul> <p>An emergency plan for the operational phase to deal with accidental spillages will be contained in the CEMP (Appendix 4-5).</p>                                                                                                                                                                                                                                                       |              |                 |

| Ref. M no.                     | Reference Heading        | Reference Location                    | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Audit Result | Action Required |
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| <b>Decommissioning Phase</b>   |                          |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |
| MM87                           | Decommissioning Phase    | EIAR Chapter 8                        | <p>The potential impacts associated with decommissioning of the Proposed Project will be similar to those associated with construction but of reduced magnitude (i.e., soil/subsoil/bedrock excavation; Contamination by Leakage/Spillages).</p> <p>Mitigation measures applied during decommissioning activities will be similar to those applied during construction phase as shown in Section <b>Error! Reference source not found.</b> of the EIAR.</p> <p>Some of the impacts will be avoided by leaving elements of the Proposed Project in place where appropriate. The substation will be retained by EirGrid. The turbine bases will be rehabilitated by covering with local topsoil/peat in order to regenerate vegetation which will reduce runoff and sedimentation effects. Internal roads will remain as amenity pathways and forestry access roads. Mitigation measures to avoid contamination by accidental fuel leakage and compaction of soil by on-site plant will be implemented as per the construction phase mitigation measures. No significant effects on the land, soils and geological environment will occur during the decommissioning stage of the Proposed Project.</p> |              |                 |
| <b>EIAR Chapter 9 Water</b>    |                          |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |
| <b>Pre- Construction Phase</b> |                          |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |
| MM88                           | Temporary Drainage Works | EIAR Chapter 4, 9<br><br>Appendix 4-3 | Prior to the commencement of construction works (new road/hardstand, turbine foundation installs or upgrade of existing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |

| Ref. M no.                | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|                           |                   |                    | <p>roads) the following key temporary drainage measures will be installed:</p> <ul style="list-style-type: none"> <li>➤ All existing land and forestry drains that intercept the proposed works area will be temporarily blocked down-gradient of the works using forestry check dams/silt traps;</li> <li>➤ Clean water interceptor drains will be installed upgradient of the works areas;</li> <li>➤ Check dams/silt fence arrangements (silt traps) will be placed in all existing that have surface water flows; and</li> <li>➤ A double silt fence perimeter will be placed down-slope of works areas that are located inside the watercourse 50m buffer zone</li> </ul> |              |                 |
| <b>Construction Phase</b> |                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |
| MM89                      | Tree Felling      | EIAR Chapter 9     | <p>Mitigation by Avoidance:</p> <p>There is a requirement in the Forest Service Code of Practice and in the FSC Certification Standard for the installation of buffer zones adjacent to aquatic zones at planting stage. Minimum buffer zone widths recommended in the Forest Service (2000) guidance document “Forestry and Water Quality Guidelines” are shown in Table 9-17 of the EIAR.</p> <p>Mitigation by Design:</p> <p>Mitigation measures which will reduce the risk of entrainment of suspended solids and nutrient release in surface watercourses comprise best practice methods which are set out as follows:</p>                                                |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ Machine combinations (i.e. handheld or mechanical) will be chosen which are most suitable for ground conditions and which will minimise soils disturbance;</li> <li>➤ All machinery will be operated by suitably qualified personnel;</li> <li>➤ Checking and maintenance of roads and culverts will be on-going through any felling operation. No tracking of vehicle through watercourses will occur, as vehicles will use road infrastructure and existing watercourse crossing points. Where possible, existing drains will not be disturbed during felling works;</li> <li>➤ Machines will traverse the Site along specified off-road routes (referred to as racks);</li> <li>➤ The location of racks will be chosen to avoid wet and potentially sensitive areas;</li> <li>➤ Brash mats will be placed on the racks to support the vehicles on soft ground, reducing mineral soil disturbance and erosion and avoiding the formation of rutted areas, in which surface water ponding can occur. Brash mat renewal should take place when they become heavily used and worn. Provision should be made for brash mats along all off-road routes, to protect the soil from compaction and rutting. Where there is risk of severe erosion occurring, extraction will be suspended during periods of high rainfall;</li> <li>➤ Silt fences will be installed at the outfalls of existing drains downstream of felling areas. No direct discharge of such drains to watercourses will occur. Sediment traps and silt fences will be installed in advance of any felling works and will provide surface water settlement for runoff from work areas and will prevent sediment from entering downstream watercourses. Accumulated sediment will be carefully disposed of at pre-selected spoil repository areas. Where possible, all new silt traps</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Audit Result | Action Required |
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|            |                   |                    | <p>will be constructed on even ground and not on sloping ground;</p> <ul style="list-style-type: none"> <li>&gt; In areas particularly sensitive to erosion it will be necessary to install double or triple sediment traps and increase buffer zone width. These measures will be reviewed onsite during construction;</li> <li>&gt; Double silt fencing will also be put down slope of felling areas which are located in close proximity to streams and/or relevant watercourses;</li> <li>&gt; Drains and silt traps will be maintained throughout all felling works, ensuring that they are clear of sediment build-up and are not severely eroded;</li> <li>&gt; Timber will be stacked in dry areas, and outside watercourse buffer zones. Check dams and silt traps will be emplaced on the down gradient side of timber storage/processing sites;</li> <li>&gt; Works will be carried out during periods of no, or low rainfall, in order to minimise entrainment of exposed sediment in surface water runoff;</li> <li>&gt; All refuelling will be completed outside of the designated 50m hydrological buffer zones. Mobile bowser, drip kits, qualified personnel will be used where refuelling is required; and,</li> <li>&gt; Branches, logs or debris will not be allowed to build up in aquatic zones. All such material will be removed when harvesting operations have been completed, but care will be taken to avoid removing natural debris deflectors.</li> </ul> <p>Silt Traps:</p> <p>Silt traps will be strategically placed down-gradient within forestry drains near streams. The main purpose of the silt traps and drain blocking is to slow water flow, increase residence time, and allow settling of silt in a controlled manner.</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Audit Result | Action Required |
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|            |                   |                    | <p>Timing of Proposed Project Felling Works:</p> <p>Felling will only be carried out during periods of no or low rainfall, and therefore minimum runoff rates. This will minimise the risk of entrainment of suspended sediment in surface water runoff, and transport via this pathway to surface watercourses.</p> <p>Drain Inspection and Maintenance:</p> <p>The following items will be carried out during pre-felling inspections and after:</p> <ul style="list-style-type: none"> <li>➤ Communication with tree felling operatives in advance to determine whether any areas have been reported where there is unusual water logging or bogging of machines;</li> <li>➤ Inspection of all areas reported as having unusual ground conditions;</li> <li>➤ Inspection of main drainage ditches and outfalls. During pre-felling inspections the main drainage ditches will be identified. Ideally the pre-felling inspection will be carried out during rainfall;</li> <li>➤ Following tree felling all main drains will be inspected to ensure that they are functioning;</li> <li>➤ Extraction tracks within 10m of drains will be broken up and diversion channels created to ensure that water in the tracks spreads out over the adjoining ground;</li> <li>➤ Culverts on drains exiting the Site, if impeded by silt or debris, will be unblocked; and,</li> <li>➤ All accumulated silt will be removed from drains and culverts, and silt traps, and this removed material will be deposited away from watercourses to ensure that it</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Audit Result | Action Required |
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|            |                   |                    | <p>will not be carried back into the trap or stream during subsequent rainfall.</p> <p>Surface Water Quality Monitoring:</p> <p>Sampling will be completed before, during (if the operation is conducted over a protracted time) and after the felling activity. The ‘before’ sampling will be conducted within 4 weeks of the felling activity commencing, preferably in medium to high water flow conditions. The “during” sampling will be undertaken once a week or after rainfall events. The ‘after’ sampling will comprise as many samplings as necessary to demonstrate that water quality has returned to pre-activity status (i.e. where an impact has been shown).</p> <p>Criteria for the selection of water sampling points include the following:</p> <ul style="list-style-type: none"> <li>➤ Avoid man-made ditches and drains, or watercourses that do not have year round flows, i.e. avoid ephemeral ditches, drains or watercourses;</li> <li>➤ Select sampling points upstream and downstream of the forestry activities;</li> <li>➤ It is advantageous if the upstream location is outside/above the forest in order to evaluate the impact of land-uses other than forestry;</li> <li>➤ Downstream locations will be selected: one immediately below the forestry activity, the second at exit from the forest, and the third some distance from the second (this allows demonstration of no impact through dilution effect or contamination by other land-uses where impact increases at third downstream location relative to second downstream location); and,</li> <li>➤ The above sampling strategy will be undertaken for all on-site sub-catchments streams where tree felling is proposed.</li> </ul> |              |                 |

| Ref. M no. | Reference Heading                                                      | Reference Location                                                                   | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Audit Result | Action Required |
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|            |                                                                        |                                                                                      | Also, daily surface water monitoring forms (for visual inspections and field chemistry measurements) will be utilised at every works site near any watercourse. These will be taken daily and kept on site for record and inspection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |
| MM90       | Earthworks Resulting in Suspended Solids Entrainment in Surface Waters | <p>EIAR Chapter 4, 9</p> <p>Appendix 4-2</p> <p>Appendix 4-3</p> <p>Appendix 4-5</p> | <p><u>Mitigation by Avoidance</u></p> <p>The key mitigation measure during the construction phase is the avoidance of sensitive hydrological features where possible, by application of suitable buffer zones (i.e. 50m to main watercourses).</p> <p>During the Proposed Wind Farm construction phase a self-imposed buffer zone of 50 metres will be maintained for all streams where possible. These buffer zones are shown on Error! Reference source not found..</p> <p>The large setback distance from sensitive hydrological features means that adequate room is maintained for the proposed drainage mitigation measures (discussed below) to be properly installed and operate effectively. The proposed buffer zone will:</p> <ul style="list-style-type: none"> <li>➤ Avoid physical damage (river/stream banks and river/stream beds) to watercourses and associated release of sediment;</li> <li>➤ Avoid excavations within close proximity to surface watercourses;</li> <li>➤ Avoid the entry of suspended sediment from earthworks into watercourses; and,</li> <li>➤ Avoid the entry of suspended sediment from the construction phase drainage system into watercourses, achieved in part by ending drain discharge outside the buffer zone and allowing percolation across the vegetation of the buffer zone.</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Audit Result | Action Required |
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|            |                   |                    | <p><u>Mitigation by Design:</u></p> <p>Proposed Wind Farm site:</p> <ul style="list-style-type: none"> <li>➤ Source controls: <ul style="list-style-type: none"> <li>○ Interceptor drains, vee-drains, diversion drains, flume pipes, erosion and velocity control measures such as use of sandbags, oyster bags filled with gravel, filter fabrics, and other similar/equivalent or appropriate systems.</li> <li>○ Small working areas, covering stockpiles, weathering off stockpiles, cessation of works in certain areas.</li> </ul> </li> <li>➤ In-Line controls: <ul style="list-style-type: none"> <li>○ Interceptor drains, vee-drains, oversized swales, erosion and velocity control measures such as check dams, sand bags, oyster bags, flow limiters, weirs, baffles, silt bags, silt fences, sedimats, filter fabrics, and collection sumps, temporary sumps, sediment traps, pumping systems, settlement ponds, temporary pumping chambers, or other similar/equivalent or appropriate systems.</li> </ul> </li> <li>➤ Treatment systems: <ul style="list-style-type: none"> <li>○ Temporary sumps and ponds, temporary storage lagoons, sediment traps, and settlement ponds, and proprietary settlement systems such as Silbuster, and/or other similar/equivalent or appropriate systems.</li> </ul> </li> </ul> <p>It should be noted that for the Proposed Wind Farm site, an extensive network of forestry, peat and agricultural drains already exist, and these will be integrated and enhanced as required and used within the Proposed Wind Farm drainage system. The integration of the existing forestry drainage network and the Proposed Wind Farm network is relatively simple. The key elements being the upgrading and improvements to existing water treatment elements, such as in line controls and treatment systems, including silt traps, settlement ponds and buffered outfalls.</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Audit Result | Action Required |
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|            |                   |                    | <p>The main elements of interaction with existing drains will be as follows:</p> <ul style="list-style-type: none"> <li>➤ Apart from interceptor drains, which will convey clean runoff water to the downstream drainage system, there will be no direct discharge (without treatment for sediment reduction, and attenuation for flow management) of runoff from the Proposed Wind Farm site drainage into the existing site drainage network. This will reduce the potential for any increased risk of downstream flooding or sediment transport/erosion;</li> <li>➤ Silt traps will be placed in the existing drains upstream of any streams where construction works / tree felling is taking place, and these will be diverted into proposed interceptor drains, or culverted under/across the works area;</li> <li>➤ Runoff from individual turbine hardstanding areas will be not discharged into the existing drain network but discharged locally at each turbine location through settlement ponds and buffered outfalls onto vegetated surfaces;</li> <li>➤ Buffered outfalls which will be numerous over the Proposed Wind Farm site will promote percolation of drainage waters across vegetation and close to the point at which the additional runoff is generated, rather than direct discharge to the existing drains of the Proposed Wind Farm site; and,</li> <li>➤ Drains running parallel to the existing roads requiring widening will be upgraded, widening will be targeted to the opposite side of the road. Velocity and silt control measures such as check dams, sandbags, oyster bags, flow limiters, weirs, baffles, silt fences will be used during the upgrade construction works. Regular</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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|            |                   |                    | <p>buffered outfalls will also be added to these drains to protect downstream surface waters.</p> <p>Proposed Grid Connection:</p> <p>The majority of the Proposed Grid Connection is &gt;50m from any nearby watercourse, sections within 50m of the Proposed Grid Connection are confined to existing watercourse crossings at bridges and culverts. It is proposed to limit any works in any areas located within 50m of any watercourse/waterbody including the stockpiling of excavated soils and subsoils.</p> <p>No in-stream works are required at any of these crossings, however due to the proximity of the streams to the construction work at the crossing locations, there is a potential for surface water quality impacts during trench excavation work. Mitigation measures are outlined below.</p> <p>A constraint/buffer zone will be maintained for all crossing locations where possible, whereby all watercourses will be fenced off. In addition, measures which are outlined below will be implemented to ensure that silt laden or contaminated surface water runoff from the excavation work does not discharge directly to the watercourse.</p> <p>Silt Fences:</p> <p>Silt fences will be emplaced within drains down-gradient of all construction areas. Silt fences are effective at removing heavy settleable solids such as those present in the subsoils/sandstone tills that overlie the site. This will act to prevent entry to water courses of sand and gravel sized sediment, released from excavation of mineral sub-soils of glacial and glacio-fluvial origin, and entrained in surface water runoff. Inspection and maintenance of these of these structures during construction phase is critical to their functioning to stated purpose. They will remain in place throughout the</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
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|            |                   |                    | <p>entire construction phase. Double silt fences will be placed within drains down-gradient of all construction areas inside the hydrological buffer zones.</p> <p>Silt Bags:</p> <p>Silt bags will be used where small to medium volumes of water need to be pumped from excavations. As water is pumped through the bag, the majority of the sediment is retained by the geotextile fabric allowing filtered water to pass through. Silt bags will be used with natural vegetation filters or sedimats Sediment entrapment mats, consisting of coir or jute matting, will be placed at the silt bag location to provide further treatment of the water outfall from the silt bag. Sedimats will be secured to the ground surface using stakes/pegs. The sedimat will extend to the full width of the outfall to ensure all water passes through this additional treatment measure.</p> <p>Settlement Ponds:</p> <p>The Proposed Wind Farm footprint has been divided into drainage catchments (based on topography, outfall locations, catchment size) and stormwater runoff rates based on the 10-year return period rainfall event were calculated for each catchment. These flows were then used to design settlement ponds for each drainage catchment. The settlement ponds are designed for 11hr or 24hr retention times used to settle out medium silt (0.006mm) and fine silt (0.004mm) respectively (EPA, 2006).</p> <p>The supporting design calculations for all settlement ponds are included on Drawing D501 included in Appendix 4-3.</p> <p>Level Spreaders and Vegetation Filters:</p> <p>The purpose of level spreaders is to release treated drainage flow in a diffuse manner, and to prevent the concentration of flows at any one location thereby avoiding erosion. Level spreaders are not intended to be a primary treatment component for development surface water runoff. They</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Audit Result | Action Required |
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|            |                   |                    | <p>are not stand alone but occur as part of a treatment train of systems that will reduce the velocity of runoff prior to be released at the level spreader. In the absence of level spreaders, the potential for ground erosion is significantly greater than not using them.</p> <p>Vegetation filters are essentially end-of-line polishing filters that are located at the end of the treatment train. In fact, vegetation filters are ultimately a positive consequence of not discharging directly into watercourses which is one of the mitigation components of the drainage philosophy. This makes use of the natural vegetation of the Proposed Wind Farm site to provide a polishing filter for the Proposed Wind Farm drainage prior to reaching the downstream watercourses.</p> <p>Again, vegetation filters are not intended to be a single or primary treatment component for treatment of works area runoff. They are not stand alone but are intended as part of a treatment train of water quality improvement/control systems (i.e. source controls → check dams → silt traps → settlement ponds → level spreaders → silt fences → vegetation filters).</p> <p>Water Treatment Train:</p> <p>A final line of defence will be provided by a water treatment train such as a “Siltbuster”. If the discharge water from construction areas fails to be of a high quality during regular inspections, then a filtration treatment system (such as a ‘Siltbuster’ or similar equivalent treatment train (sequence of water treatment processes) will be used to filter and treat all surface discharge water collected in the dirty water drainage system. This will apply for all of the construction phase.</p> <p>Pre-emptive Site Drainage Management</p> <p>The works programme for the entire construction stage of the Proposed Project will also take account of weather forecasts, and predicted rainfall in</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Audit Result | Action Required |
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|            |                   |                    | <p>particular. Large excavations and movements of soil/subsoil or vegetation stripping will be suspended or scaled back if heavy rain is forecast. The extent to which works will be scaled back or suspended will relate directly to the amount of rainfall forecast.</p> <p>The following forecasting systems are available and will be used on a daily basis at the Site to direct proposed construction activities:</p> <ul style="list-style-type: none"> <li>➤ General Forecasts: Available on a national, regional and county level from the Met Eireann website (<a href="http://www.met.ie/forecasts">www.met.ie/forecasts</a>). These provide general information on weather patterns including rainfall, wind speed and direction but do not provide any quantitative rainfall estimates;</li> <li>➤ MeteoAlarm: Alerts to the possible occurrence of severe weather for the next 2 days. Less useful than general forecasts as only available on a provincial scale;</li> <li>➤ 3-hour Rainfall Maps: Forecast quantitative rainfall amounts for the next 3 hours but does not account for possible heavy localised events;</li> <li>➤ Rainfall Radar Images: Images covering the entire country are freely available from the Met Eireann website (<a href="http://www.met.ie/latest/rainfall_radar.asp">www.met.ie/latest/rainfall_radar.asp</a>). The images are a composite of radar data from Shannon and Dublin airports and give a picture of current rainfall extent and intensity. Images show a quantitative measure of recent rainfall. A 3-hour record is given and is updated every 15 minutes. Radar images are not predictive; and,</li> <li>➤ Consultancy Service: Met Eireann provide a 24-hour telephone consultancy service. The forecaster will provide interpretation of weather data and give the best available forecast for the area of interest.</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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|            |                   |                    | <p>Using the safe threshold rainfall values will allow work to be safely controlled (from a water quality perspective) in the event of forecasting of an impending high rainfall intensity event.</p> <p>Works will be suspended if forecasting suggests either of the following is likely to occur:</p> <ul style="list-style-type: none"> <li>➤ &gt;10 mm/hr (i.e. high intensity local rainfall events);</li> <li>➤ &gt;25 mm in a 24-hour period (heavy frontal rainfall lasting most of the day); or,</li> <li>➤ &gt;half monthly average rainfall in any 7 days.</li> </ul> <p>Prior to works being suspended the following control measures will be completed:</p> <ul style="list-style-type: none"> <li>➤ All active excavations will be secured and sealed off;</li> <li>➤ Temporary or emergency drainage will be installed to prevent back-up of surface runoff; and,</li> <li>➤ No works will be completed during heavy rainfall and for up to 24 hours after heavy events to ensure drainage systems are not overloaded.</li> </ul> <p>Management of Runoff from the Peat and Spoil Management Areas:<br/>It is proposed that excavated spoil and peat will be used for landscaping where required. The excess material will then be placed in 4 no. dedicated Peat Repository Areas (PRA) and 5 no. Spoil Deposition Area (SDA).</p> <p>All proposed PRAs and the SDA are located outside of 50m watercourse buffers and also outside of 10m drainage ditch buffers.</p> <p>During the initial construction of repository/deposition areas, silt fences, straw bales and biodegradable geogrids will be used to control surface water runoff from works areas.</p> |              |                 |

| Ref. M no. | Reference Heading                                                             | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Audit Result | Action Required |
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|            |                                                                               |                    | <p>Where applicable, the vegetative top-soil layer of the peat and spoil management areas will be rolled back to facilitate placement of excavated spoil, following which the vegetative-top soils layer will be reinstated. Where reinstatement is not possible, spoil and peat management areas will be sealed with a digger bucket and seeded as soon possible to reduce sediment entrainment in runoff.</p> <p>Drainage from peat and spoil storage areas will ultimately be routed to an oversized swale and a number of stilling ponds pond with appropriate storage and settlement designed for a 1 in 10-year return period before being discharged to the on-site drains.</p> <ul style="list-style-type: none"> <li>➤ Peat/subsoil reinstatement areas will be sealed with a digger bucket and vegetated as soon possible to reduce sediment entrainment in runoff. Once re-vegetated and stabilised peat/subsoil reinstatement areas will no longer be a potential source of silt laden runoff.</li> </ul> |              |                 |
| MM91       | Works Within the Hydrological Buffer Zones within the Proposed Wind Farm Site | EIAR Chapter 9     | <p><u>Mitigation by Avoidance:</u></p> <p>The key mitigation measure during the construction phase of the Proposed Wind Farm is the avoidance of sensitive aquatic areas where possible From Error! Reference source not found. it can be seen that all of the key areas of the Proposed Wind Farm infrastructure are actually significantly away from the 50m delineated buffer zones with the exception of proposed new roads, 5 no. proposed new stream crossings.</p> <p>Additional control measures, which are outlined further on in this section, will be undertaken at these locations. 10m buffers will be maintained for all drains, albeit drains are not considered sensitive.</p>                                                                                                                                                                                                                                                                                                                        |              |                 |

| Ref. M no. | Reference Heading                                | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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|            |                                                  |                    | <p>The large setback distance from sensitive hydrological features means that adequate room is maintained for the proposed drainage mitigation measures (discussed below) to be properly installed and operated effectively. The proposed buffer zone will:</p> <ul style="list-style-type: none"> <li>➤ Avoid physical damage to watercourses, and associated release of sediment;</li> <li>➤ Avoid excavations within close proximity to surface water courses;</li> <li>➤ Avoid the entry of suspended sediment from earthworks into watercourses; and,</li> <li>➤ Avoid the entry of suspended sediment from the construction phase drainage system into watercourses, achieved in part by ending drain discharge outside the buffer zone and allowing percolation across the vegetation of the buffer zone.</li> </ul> |              |                 |
| MM92       | Surface Water Quality from Excavation Dewatering | EIAR Chapter 9     | <p>Management of groundwater seepages and subsequent treatment prior to discharge into the drainage network will be undertaken as follows:</p> <ul style="list-style-type: none"> <li>➤ Appropriate interceptor drainage, to prevent upslope surface runoff from entering excavations will be put in place;</li> <li>➤ If required, pumping of excavation inflows will prevent build-up of water in the excavation;</li> <li>➤ The interceptor drainage will be discharged to the site constructed drainage system or onto natural vegetated surfaces and not directly to surface waters;</li> <li>➤ The pumped water volumes will be discharged via volume and sediment attenuation ponds adjacent to excavation areas, or via specialist treatment systems such as a Siltbuster unit;</li> </ul>                          |              |                 |

| Ref. M no. | Reference Heading | Reference Location                           | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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|            |                   |                                              | <ul style="list-style-type: none"> <li>➤ There will be no direct discharge to surface watercourses, and therefore no risk of hydraulic loading or contamination will occur;</li> <li>➤ Daily monitoring of excavations by the Environmental Clerk of Works will occur during the construction phase. If high levels of seepage inflow occur, excavation work will immediately be stopped and a geotechnical assessment undertaken; and,</li> </ul> <p>A mobile ‘Siltbuster’ or similar equivalent specialist treatment system will be available on-site for emergencies in order to treat sediment polluted waters from settlement ponds or excavations should they occur. Siltbusters are mobile silt traps that can remove fine particles from water using a proven technology and hydraulic design in a rugged unit. The mobile units are specifically designed for use on construction-sites. They will be used as final line of defence if needed.</p> |              |                 |
| MM93       | Hydrocarbons      | <p>EIAR Chapter 4, 9</p> <p>Appendix 4-5</p> | <p>Mitigation measures proposed to avoid release of hydrocarbons are as follows:</p> <ul style="list-style-type: none"> <li>➤ Wherever possible, vehicles will be refuelled off-site, particularly for regular road-going vehicles.</li> <li>➤ All plant will be inspected and certified to ensure that they are leak free and in good working order prior to use at the Site.</li> <li>➤ On-site refuelling of machinery will be carried out at designated refuelling areas at various locations throughout the Site.</li> <li>➤ Heavy plant and machinery will be refuelled on-site by a fuel truck, with spill kits kept onboard, that will come to the Site as required on a scheduled and organised basis.</li> <li>➤ Other refuelling will be carried out using mobile double skinned fuel bowser. The fuel bowser will be parked on</li> </ul>                                                                                                       |              |                 |

| Ref. M no. | Reference Heading            | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
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|            |                              |                    | <ul style="list-style-type: none"> <li>a level area in the construction compound when not in use</li> <li>➤ Only designated trained operatives will be authorised to refuel plant on-site;</li> <li>➤ Refuelling or maintenance of machinery will not occur within 100m of a watercourse;</li> <li>➤ Fuels stored on the Proposed Wind Farm site will be minimised;</li> <li>➤ Any diesel or fuel oils stored at the temporary construction compound will be banded. The bund capacity will be sufficient to contain 110% of the storage tank's maximum capacity;</li> <li>➤ An emergency plan for the construction phase to deal with accidental spillages will be contained within the Construction and Environmental Management Plan (Appendix 4-5). Spill kits will be available to deal with accidental spillages.</li> </ul> |              |                 |
| MM94       | Wastewater                   | EIAR Chapter 9     | <ul style="list-style-type: none"> <li>➤ During the construction phase, a self-contained port-a-loo with an integrated waste holding tank will be used at each of the site construction compounds (and along the Proposed Grid Connection as required), maintained by the providing contractor, and removed from site on completion of the construction works;</li> <li>➤ Water supply for the site office and other sanitation will be brought to Site and removed after use from the Site to be discharged at a suitable off-site treatment location; and,</li> <li>➤ No water or wastewater will be sourced on the Site, nor discharged to the Site.</li> </ul>                                                                                                                                                                 |              |                 |
| MM95       | Use of Cement Based Products | EIAR Chapter 4, 9  | <ul style="list-style-type: none"> <li>➤ No batching of wet-concrete products will occur on site. Ready-mixed supply of wet concrete products and</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |

| Ref. M no. | Reference Heading                                                                | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Audit Result | Action Required |
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|            |                                                                                  | Appendix 4-5       | <p>where possible, emplacement of pre-cast elements, will take place;</p> <ul style="list-style-type: none"> <li>➤ Where possible pre-cast elements for culverts and concrete works will be used;</li> <li>➤ Where concrete is delivered on site, only the chute will be cleaned, using the smallest volume of water practicable. No discharge of cement contaminated waters to the construction phase drainage system or directly to any artificial drain or watercourse will be allowed. Chute cleaning water will be undertaken at lined concrete washout ponds;</li> <li>➤ Weather forecasting will be used to plan dry days for pouring concrete; and,</li> <li>➤ The pour site will be kept free of standing water and plastic covers will be ready in case of sudden rainfall event; and,</li> <li>➤ At proposed turbine foundations, sand blinding, DPM, and lean-mix blinding are used to vertically contain the concrete. While the concrete is contained laterally by temporary/permanent shuttering. The concrete cures within 72hrs.</li> </ul> |              |                 |
| MM96       | Morphological Changes to Surface Watercourses along the Proposed Grid Connection | EIAR Chapter 9     | <p>The vast majority of the Proposed Grid Connection is &gt;50m from any nearby watercourse, sections within 50m of the route are confined to existing watercourse crossings at bridges. It is proposed to limit any works in any areas located within 50m of any watercourse/waterbody including the stockpiling of excavated soils and subsoils.</p> <p>Prior to the commencement of cable trenching or crossing works the following key temporary drainage measures will be installed.</p> <p>The following mitigation measures are proposed for the grid connection crossing works:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |

| Ref. M no. | Reference Heading                                                                        | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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|            |                                                                                          |                    | <ul style="list-style-type: none"> <li>➤ No stockpiling of construction materials will take place along the grid route;</li> <li>➤ No refuelling of machinery or overnight parking of machinery is permitted in this area;</li> <li>➤ No concrete truck chute cleaning is permitted in this area;</li> <li>➤ Works will not take place at periods of high rainfall, and will be scaled back or suspended if heavy rain is forecast;</li> <li>➤ Local road drainage, culverts and manholes will be temporarily blocked during the works;</li> <li>➤ Machinery deliveries will be arranged using existing structures along the public road;</li> <li>➤ All machinery operations will take place away from the stream and ditch banks, apart from where crossings occur. Although no instream works are proposed or will occur;</li> <li>➤ Any excess construction material will be immediately removed from the area and sent to a licenced waste facility;</li> <li>➤ Spill kits will be available in each item of plant required to complete the works; and,</li> <li>➤ Silt fencing will be erected on ground sloping towards watercourses at the stream crossings if required.</li> </ul> |              |                 |
| MM97       | Morphological Changes to Surface Watercourses/ Drains within the Proposed Wind Farn site | EIAR Chapter 9     | <ul style="list-style-type: none"> <li>➤ All proposed 5 no. new stream crossings will be bottomless or clear span structures and the existing banks will remain undisturbed. No in-stream excavation works are proposed and therefore there will be no direct impact on the stream at the proposed crossing location;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ Where the proposed cable route follows an existing road or road proposed for upgrade, the cable will pass over or below the culvert within the access road;</li> <li>➤ All guidance / mitigation measures proposed by the OPW or the Inland Fisheries Ireland<sup>4</sup> is incorporated into the design of the proposed crossings;</li> <li>➤ As a further precaution, near stream construction work, will only be carried out during the period permitted by Inland Fisheries Ireland for in-stream works according to the Eastern Regional Fisheries Board (2004) guidance document “Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites”, i.e., May to September inclusive. This time period coincides with the period of lowest expected rainfall, and therefore minimum runoff rates. This will minimise the risk of entrainment of suspended sediment in surface water runoff, and transport via this pathway to surface watercourses (any deviation from this will be done in discussion with the IFI);</li> <li>➤ During the near stream construction work double row silt fences will be emplaced immediately down-gradient of the construction area for the duration of the construction phase. There will be no batching or storage of cement allowed in the vicinity of the crossing construction areas; and,</li> <li>➤ All new river/stream crossings will require a Section 50 application (Arterial Drainage Act, 1945). The river/stream crossings will be designed in accordance with OPW guidelines/requirements on applying for a Section 50 consent.</li> </ul> |              |                 |

<sup>4</sup> Inland Fisheries Ireland (2016): *Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters*

| Ref. M no. | Reference Heading                                                  | Reference Location                           | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Audit Result | Action Required |
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| MM98       | Siltbuster                                                         | <p>ElAR Chapter 9</p> <p>Appendix 4-5</p>    | <p>Measures employed to prevent overdosing and potential chemical carryover:</p> <ul style="list-style-type: none"> <li>➤ The Siltbuster system comprises an electronic in-line dosing system which provides an accurate means of adding reagents, so overdosing cannot occur;</li> <li>➤ Continued monitoring and water analysis of pre and post treated water by means of an inhouse lab and dedicated staff, means the correct amount of chemical is added by the dosing system;</li> <li>➤ Dosing rates of chemical to initiate settlement is small, being in the order of 2-10 mg/L and the vast majority of the chemical is removed in the deposited sediment;</li> <li>➤ Final effluent not meeting the discharge criteria is recycled and retreated, which has a secondary positive effect of reducing carryover; and,</li> <li>➤ Use of biodegradable chemical agents can be used at very sensitive sites (i.e. adjacent to SACs).</li> </ul> |              |                 |
| MM99       | Horizontal Directional Drilling along the Proposed Grid Connection | <p>ElAR Chapter 4, 9</p> <p>Appendix 4-5</p> | <ul style="list-style-type: none"> <li>➤ Near stream construction work, will only be carried out during the period permitted by Inland Fisheries Ireland for in-stream works according to the Eastern Regional Fisheries Board (2004) guidance document “Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites”, i.e., May to September inclusive. This time period coincides with the period of lowest expected rainfall, and therefore minimum runoff rates. This will minimise the risk of entrainment of suspended sediment in surface water runoff, and transport via this pathway to surface watercourses (any deviation from this will be done in discussion with the IFI);</li> </ul>                                                                                                                                                                                                  |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ The crossing works area will be clearly marked out with fencing or flagging tape to avoid unnecessary disturbance;</li> <li>➤ There will be no storage of material / equipment or overnight parking of machinery inside the hydrological buffer zone;</li> <li>➤ Before any ground works are undertaken, double silt fencing will be placed upslope of the watercourse channels;</li> <li>➤ Additional silt fencing or straw bales (pinned down firmly with stakes) will be placed across any natural surface depressions / channels that slope towards the watercourse;</li> <li>➤ Silt fencing will be embedded into the local soils to ensure all site water is captured and filtered;</li> <li>➤ The area around the bentonite batching, pumping and recycling plant will be bunded using terram (as it will clog) and sandbags in order to contain any spillages;</li> <li>➤ Drilling fluid returns will be contained within a sealed tank / sump to prevent migration from the works area;</li> <li>➤ Spills of drilling fluid will be cleaned up immediately and contained in an adequately sized skip before been taken off-site;</li> <li>➤ If rainfall events occur during the works, there will be a requirement to collect and treat small volumes of surface water from areas of disturbed ground (i.e. soil and subsoil exposures created during site preparation works);</li> <li>➤ This will be completed using a shallow swale and sump down slope of the disturbed ground; and water will be pumped to a proposed settlement pond area at least 50m from the watercourse;</li> <li>➤ The discharge of water onto vegetated ground will be via a silt bag which will filter any remaining sediment</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Audit Result | Action Required |
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|            |                   |                    | <p>from the pumped water. The entire percolation area will be enclosed by a perimeter of double silt fencing;</p> <ul style="list-style-type: none"> <li>➤ Any sediment laden water from the works area will not be discharged directly to a watercourse or drain;</li> <li>➤ Works shall not take place during periods of heavy rainfall and will be scaled back or suspended if heavy rain is forecasted;</li> <li>➤ Daily monitoring of the compound works area, the water treatment and pumping system and the percolation area will be completed by a suitably qualified person during the construction phase. All necessary preventative measures will be implemented to ensure no entrained sediment, or deleterious matter is discharged to the watercourse;</li> <li>➤ If high levels of silt or other contamination is noted in the pumped water or the treatment systems, all construction works will be stopped. No works will recommence until the issue is resolved and the cause of the elevated source is remedied;</li> <li>➤ On completion of the works, the ground surface disturbed during the site preparation works and at the entry and exit pits will be carefully reinstated and re-seeded at the soonest opportunity to prevent soil erosion;</li> <li>➤ The silt fencing upslope of the river will be left in place and maintained until the disturbed ground has re-vegetated;</li> <li>➤ There will be no batching of cement along the Proposed Grid Connection;</li> <li>➤ There will be no refuelling allowed within 100m of the watercourse crossing; and,</li> <li>➤ All plant will be checked for purpose of use prior to mobilisation at the watercourse crossing.</li> </ul> <p>Fracture Blow-out (Frac-out) Prevention and Contingency Plan:</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ The drilling fluid will be non-toxic and naturally biodegradable (i.e., Clear Bore Drilling Fluid or similar will be used);</li> <li>➤ The area around the drilling fluid batching, pumping and recycling plants will be bunded using terram and/or sandbags to contain any potential spillage;</li> <li>➤ One or more lines of silt fencing will be placed between the works area and the adjacent river;</li> <li>➤ Spills of drilling fluid will be cleaned up immediately and transported off-site for disposal at a licensed facility;</li> <li>➤ Adequately sized skips will be used where temporary storage of arisings are required;</li> <li>➤ The drilling process / pressure will be constantly monitored to detect any possible leaks or breakouts into the surrounding geology or local watercourse;</li> <li>➤ This will be gauged by observation and by monitoring the pumping rates and pressures. If any signs of breakout occur then drilling will be immediately stopped;</li> <li>➤ Any frac-out material will be contained and removed off-site;</li> <li>➤ The drilling location will be reviewed, before re-commencing with a higher viscosity drilling fluid mix; and,</li> <li>➤ If the risk of further frac-out is high, a new drilling alignment will be sought at the crossing location.</li> </ul> |              |                 |
| MM100      | Discharges        | Appendix 4-3       | <ul style="list-style-type: none"> <li>➤ Water containing silt will not be discharged or pumped directly to any natural watercourse. All discharges will be made over open ground or into existing field drain</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |

| Ref. M no. | Reference Heading                                                        | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Audit Result | Action Required |
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|            |                                                                          |                    | <p>with silt trap at a minimum of 20m from the nearest watercourse unless otherwise stated.</p> <ul style="list-style-type: none"> <li>&gt; No excavated material will be stored within any surface water buffer zone.</li> <li>&gt; Pumped water will be directed into track side ditches and treated in settlement ponds and vegetation swales prior to overland discharge.</li> <li>&gt; Pumping of clean water from excavations/ or over-pumping in drains/ ditches/ streams will be completed in a manner that will not cause scour or erosion at point of release/ discharge. This will be done by reducing the flow velocities or by use of suitable splash plates, and/or other similar discharge controls.</li> <li>&gt; Vegetation will not be stripped from existing drains/ ditches unless absolutely necessary</li> </ul> |              |                 |
| MM101      | Potential Effects on the Mid Galway PWS and Barnaderg GWS Water Supplies | EIAR Chapter 9     | <p>The following mitigation is proposed at <u>all construction works areas inside the SPA</u>:</p> <ul style="list-style-type: none"> <li>&gt; No storage of fuels, oils, cements, or chemicals will be permitted within the SPA</li> <li>&gt; Refuelling of mobile plant (i.e. diggers, dumpers etc) will only be permitted outside the SPA;</li> <li>&gt; Refuelling of large immobile plant (i.e. cranes) will only be carried out with a refuelling truck that will be removed from SPA immediately after use;</li> <li>&gt; Spill kit stations will be present at each turbine location (T1 &amp; T2), temporary construction compound and along the Proposed Grid Connection cable route works areas;</li> </ul>                                                                                                                 |              |                 |

| Ref. M no.               | Reference Heading                                                | Reference Location                    | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Audit Result | Action Required |
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|                          |                                                                  |                                       | <ul style="list-style-type: none"> <li>➤ There are no proposed peat or spoil repositories within the SPA as part of design mitigation;</li> <li>➤ A geotextile liner will be placed below the founding layer (lean mix concrete) where concrete is to be poured. These both prevent vertical loss of wet concrete at turbine bases;</li> <li>➤ Use of perimeter shuttering at turbine basis to prevent lateral loss of wet concrete;</li> <li>➤ All temporary cement washout lagoons will be located outside the SPA;</li> <li>➤ Works inside the Lecarrow Stream 50m watercourse buffer limited to 1 no. proposed watercourse crossing culvert which will be clear spanning;</li> <li>➤ No wind farm drainage will be released inside the 50m watercourse buffer on the Lecarrow 30 Stream;</li> <li>➤ No wind farm drainage will be released inside the 30m buffer for the 1 no. potential enclosed depression/doline mapped inside the SPA at the Proposed Wind Farm site</li> <li>➤ Drainage control measures at works areas along the Proposed Grid Connection (Refer to Section <b>Error! Reference source not found.</b> of the EIAR); and,</li> <li>➤ There will be clear signage in place inside the refined SPA to remind construction workers that the area is inside a drinking water protection area.</li> </ul> |              |                 |
| <b>Operational Phase</b> |                                                                  |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |
| MM102                    | Replacement of Natural Surfaces with Lower Permeability Surfaces | EIAR Chapter 4, 9<br><br>Appendix 4-3 | Mitigation by Design:<br><br>The operational phase drainage system of the Proposed Project will be installed and constructed in conjunction with the road and hardstanding construction work as described below and as shown on the drainage drawings submitted with this planning application (Appendix 4-3):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |

| Ref. M no. | Reference Heading                                   | Reference Location                    | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Audit Result | Action Required |
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|            |                                                     | Appendix 4-5                          | <ul style="list-style-type: none"> <li>Interceptor drains will be installed up-gradient of all proposed infrastructure to collect clean surface runoff, in order to minimise the amount of runoff reaching areas where suspended sediment could become entrained. It will then be directed to areas where it can be re-distributed over the ground by means of a level spreader;</li> <li>Swales/road side drains will be used to collect runoff from access roads and turbine hardstanding areas of the Site, likely to have entrained suspended sediment, and channel it to settlement ponds for sediment settling;</li> <li>On steep sections of access road transverse drains ('grips') will be constructed in the surface layer of the road to divert any runoff off the road into swales/road side drains;</li> <li>Check dams will be used along sections of access road drains to intercept silts at source. Check dams will be constructed from a 4/40mm non-friable crushed rock;</li> <li>Settlement ponds, emplaced downstream of road swale sections and at turbine locations, will buffer volumes of runoff discharging from the drainage system during periods of high rainfall, by retaining water until the storm hydrograph has receded, thus reducing the hydraulic loading to watercourses; and,</li> <li>Settlement ponds have been designed in consideration of the greenfield runoff rate.</li> </ul> |              |                 |
| MM103      | Runoff Resulting in Contamination of Surface Waters | EIAR Chapter 4, 9<br><br>Appendix 4-5 | <ul style="list-style-type: none"> <li>Mitigation measures for sediment control are the same as those outlined above for the construction phase.</li> </ul> <p>With regards to hydrocarbons:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |

| Ref. M no. | Reference Heading                                                        | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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|            |                                                                          |                    | <ul style="list-style-type: none"> <li>➤ Onsite re-fuelling of normal operational vehicles will not be carried out during the operational phase of the Proposed Project. These vehicles will be refuelled offsite;</li> <li>➤ Fuels stored on site will be minimised and any hydrocarbons stored on-site will be bunded. The bund capacity will be sufficient to contain 110% of the storage tank's maximum capacity;</li> <li>➤ The substation will be bunded appropriately to the volume of oils likely to be stored, and to prevent leakage of any associated chemicals and to prevent groundwater or surface water. The bunded area will be fitted with a storm drainage system and an appropriate oil interceptor;</li> <li>➤ Oil in the turbine transformers will be fully bunded within the enclosed turbine and as such, there is no potential pathway to the water environment i.e. the pathway has been blocked;</li> <li>➤ Any plant used during the operational phase will be regularly inspected for leaks and fitness for purpose; and,</li> <li>➤ Spill kits will be available to deal with accidental spillages.</li> </ul> |              |                 |
| MM104      | Potential Effects on the Mid Galway PWS and Barnaderg GWS Water Supplies | ELAR Chapter 9     | <p>The potential for effects during the operational phase of the Proposed Project is much reduced as there are no further construction activities along with the associated potential sources such as hydrocarbons/cement/ exposure of subsoils/bedrock.</p> <p>During the operational phase of the Proposed Project, the only regular plant which will be required on site will be maintenance/inspection vehicles (jeeps/vans/quads) and these will not be refuelled on-site.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |

| Ref. M no.                    | Reference Heading     | Reference Location                | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Audit Result | Action Required |
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|                               |                       |                                   | <p>Any hydrocarbons (oil) present within the turbine generator and gear box will be enclosed within a bund with 110% capacity. There will be no storage of fuels, oils and chemicals inside any of the turbines.</p> <p>Automated oil leak detectors will be placed in each of the turbines which will allow early detection of even the smallest leaks of oil or hydraulic fluid that may arise from components such as the transformer or gearbox.</p> <p>The automated detection system will then rapidly notify the wind farm operator by cloud-based systems. This early detection system will prevent large leaks of oil or hydraulic fluid.</p> |              |                 |
| <b>Decommissioning Phase</b>  |                       |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |
| MM105                         | Decommissioning Phase | EIAR Chapter 9                    | The potential impacts associated with decommissioning of the Proposed Project will be similar to those associated with construction but of a reduced magnitude, due to the reduced scale of the proposed decommissioning works in comparison to construction phase works. Mitigation measures to avoid contamination by accidental fuel leakage and compaction of soil by on-site plant will be implemented as per the construction phase mitigation measures.                                                                                                                                                                                         |              |                 |
| <b>Chapter 10 Air Quality</b> |                       |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |
| <b>Construction Phase</b>     |                       |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |
| MM106                         | Exhaust Emissions     | EIAR Chapter 10<br>CEMP Section 3 |  All construction vehicles and plant used onsite during the construction phase will be maintained in good operational order. If a vehicle requires repairs this work will be carried                                                                                                                                                                                                                                                                                                                                                                               |              |                 |

| Ref. M no. | Reference Heading | Reference Location                           | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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|            |                   |                                              | <p>out at an appropriate offsite location, thereby minimising any emissions that arise.</p> <ul style="list-style-type: none"> <li>➤ Turbines components will be transported to the Proposed Wind Farm on specified routes only (see Chapter 15 Material Assets), unless otherwise agreed with the Planning Authority.</li> <li>➤ All machinery and vehicles will be switched off when not in use and not left idling.</li> <li>➤ The majority of aggregate materials for the construction of the Proposed Project will be imported from off-site. This will significantly reduce the number of delivery vehicles accessing the Proposed Wind Farm, thereby reducing the amount of emissions associated with vehicle movements.</li> <li>➤ Deliveries of aggregate materials will be sourced from local quarries which will reduce the distance of these deliveries, thereby reducing the effect to traffic and transport in the wider area.</li> <li>➤ The Materials Recovery Facility (MRF) will be as close as possible to the Proposed Wind Farm and Proposed Grid Connection to reduce the amount of emissions associated with vehicle movements.</li> </ul> |              |                 |
| MM107      | Dust Emissions    | <p>EIAR Chapter 10</p> <p>CEMP Section 3</p> | <ul style="list-style-type: none"> <li>➤ A wheel wash facility will be installed on the Proposed Wind Farm site and will be used by vehicles before leaving the Site</li> <li>➤ Wetting of loose stone surface will be carried out during the construction phase to minimise movement of dust particles to the air. In periods of extended dry weather, dust suppression will be carried out along haul roads to ensure dust does not cause a nuisance. Water bowser movements will be carefully monitored to avoid increased runoff.</li> <li>➤ All plant and materials vehicles for the Proposed Project will be stored in dedicated areas within the Proposed Wind Farm.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ Areas of excavation will be kept to a minimum, and stockpiling will be minimised by coordinating excavation, spreading and compaction.</li> <li>➤ Turbines and construction traffic will be transported to the Proposed Wind Farm on specified haul routes only.</li> <li>➤ The Proposed Grid Connection infrastructure will be transported to the Proposed Grid Connection on specified haul routes only.</li> <li>➤ Construction materials for the Proposed Project will be sourced locally from licenced quarries.</li> <li>➤ The agreed haul route road adjacent to the Proposed Wind Farm will be checked weekly by the Site Manager for cleanliness and cleaned as necessary.</li> <li>➤ The roads adjacent to the Proposed Wind Farm entrances will be checked weekly for damage/potholes and repaired as necessary.</li> <li>➤ The transportation of materials around the Proposed Wind Farm will be covered by tarpaulin or similar covered vehicles.</li> <li>➤ The transportation of construction materials from locally sourced quarries for the Proposed Grid Connection infrastructure and a small volume for the Proposed Wind Farm Site will be covered by tarpaulin.</li> <li>➤ In periods of extended dry weather, excavated material will be dampened prior to transport to the spoil management areas.</li> <li>➤ Waste material will be transferred to a licensed/permitted Materials Recovery Facility (MRF) by an appropriately licensed waste contractor. The MRF facility will be local to the Proposed Project to reduce the amount of emissions associated with vehicle movements</li> <li>➤ The Construction and Environmental Management Plan (CEMP) submitted as part of this planning application will be a key contract document and will be implemented in full by the contractor throughout the construction phase. (see</li> </ul> |              |                 |

| Ref. M no.                   | Reference Heading          | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Audit Result | Action Required |
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|                              |                            |                    | Appendix 4-5). The CEMP includes dust suppression measures.<br><br>➤                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                 |
| <b>Operational Phase</b>     |                            |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |
| MM108                        | Exhaust and Dust Emissions | EIAR Chapter 10    | <ul style="list-style-type: none"> <li>➤ Any vehicles or plant brought onsite during the operational phase will be maintained in good operational order that comply with the Road Traffic Acts 1961 as amended, thereby minimising any emissions that arise.</li> <li>➤ When stationary, delivery and on-site vehicles will have their engines switched off.</li> <li>➤ Waste material will be transferred to a licensed/permitted Materials Recovery Facility (MRF) by a fully licensed waste contractor where the waste will be sorted into individual waste streams for recycling, recovery or disposal.</li> <li>➤ The MRF facility will be local to the Site to reduce the emissions associated with vehicle movements.</li> </ul> |              |                 |
| <b>Decommissioning Phase</b> |                            |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |
| MM109                        | Decommissioning Phase      | EIAR Chapter 10    | Any impact and consequential effect that occurs during the decommissioning phase are similar to that which occur during the construction phase, be it of less effect. The mitigation measures prescribed for the construction phase of the Proposed Project will be implemented during the decommissioning phase thereby minimising any potential impacts.                                                                                                                                                                                                                                                                                                                                                                              |              |                 |

| Ref. M no.                | Reference Heading        | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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| <b>Chapter 11 Climate</b> |                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |
| <b>Construction Phase</b> |                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |
| MM110                     | Greenhouse Gas Emissions | EIAR Chapter 11    | <ul style="list-style-type: none"> <li>➤ Construction staff will be trained how to inspect and maintain construction vehicles and plant to ensure good operational order while onsite, thereby minimising any emissions that arise. The Site Supervisor/Construction Manager produce and follow a site inspection and machinery checklist which will be followed and updated if/when required.</li> <li>➤ All construction vehicles and plant will be maintained in good operational order while onsite, thereby minimising any emissions that arise.</li> <li>➤ When stationary, delivery and on-site vehicles will be required to turn off engines.</li> <li>➤ Turbines and construction materials will be transported to the site on specified routes only unless otherwise agreed with the Planning Authority. Please see Chapter 15 Material Assets for details.</li> <li>➤ It is intended to obtain the materials for the construction of the Proposed Wind Farm site from local licenced quarries.</li> <li>➤ Areas of excavation will be kept to a minimum, and stockpiling of excavated material will be minimised by coordinating excavation, placement of material in peat and spoil management areas</li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Audit Result | Action Required |
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|            |                   |                    | <ul style="list-style-type: none"> <li>➤ A Construction and Environmental Management Plan (CEMP) (Appendix 4-5) will be in place throughout the construction phase.</li> <li>➤ The CEMP (Appendix 4-5) includes a Waste Management Plan (WMP) which outlines the best practice procedures that will occur during the construction phase relating to waste material. <ul style="list-style-type: none"> <li>○ The WMP outlines the methods of waste prevention and minimisation by recycling, recovery and reuse at each stage of construction of the Proposed Project. Disposal of waste will be seen as a last resort.</li> <li>○ Section 4.4.6 of Chapter 4 for this EIAR refers to the methodology that will be utilised to manage onsite waste. This waste material will be transferred to a licensed /permitted Materials Recovery Facility (MRF) by a fully licensed waste contractor,</li> <li>○ The MRF facility will be local to the Proposed Project to reduce the amount of emissions associated with vehicle movements.</li> </ul> </li> <li>➤ Aggregate materials for the construction of the Proposed Project will be obtained from local appropriately authorised quarries, for the purposes of this assessment 3 no. existing, authorised quarries, located within 20km of the Proposed Wind Farm site have been selected. This will reduce journey distances of the delivery vehicles accessing the site, thereby</li> </ul> |              |                 |

| Ref. M no.                   | Reference Heading        | Reference Location                  | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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|                              |                          |                                     | <p>reducing the amount of emissions associated with vehicle movements.</p> <ul style="list-style-type: none"> <li>➤ Where applicable, low carbon intensive construction materials will be sourced and utilised onsite</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |
| <b>Operational Phase</b>     |                          |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |
| MM111                        | Greenhouse Gas Emissions | EIAR Chapter 11<br><br>Appendix 6-4 | <ul style="list-style-type: none"> <li>➤ Ensure that all maintenance and monitoring vehicles will be maintained in good operational order while onsite, and, when stationary, be required to turn off engines thereby minimising any emissions that arise.</li> <li>➤ As detailed in Appendix 6-4, BMEP for the Proposed Wind Farm site has identified biodiversity enhancement and management activities such as native hedgerow planting (approximately 4,700m of hedgerows). It is also proposed to plant approximately 11.5ha of native woodland to replace the 10.55ha loss of monoculture Sitka spruce and further increase the biodiversity value within the Site.</li> <li>➤ The remaining identified 0.7ha of commercial forestry that will be permanently felled for the Proposed Wind Farm site will be replaced or replanted on a hectare for hectare basis as a condition of any felling licence that will be issued in respect of the Proposed Wind Farm site felling (Section 4.3.1.8 of Chapter 4 of this EIAR).</li> </ul> |              |                 |
| <b>Decommissioning Phase</b> |                          |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |

| Ref. M no.                     | Reference Heading     | Reference Location                    | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
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| MM112                          | Decommissioning Phase | EIAR Chapter 11                       | The mitigation measures prescribed for the construction phase of the Proposed Project will be implemented during the decommissioning phase thereby minimising any potential impacts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |
| <b>EIAR Chapter 12 Noise</b>   |                       |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |
| <b>Pre- Construction Phase</b> |                       |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |
| MM113                          | Construction Noise    | EIAR Chapter 12                       | Local residents will be kept informed of the proposed working schedule, where appropriate, including the times and duration of any abnormally noisy activity that may cause concern;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |
| <b>Construction Phase</b>      |                       |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |
| MM114                          | Construction Noise    | EIAR Chapter 12<br><br>CEMP Section 3 | <p>Good onsite practices, both for construction of the Proposed Wind Farm and the Proposed Grid Connection will be implemented to minimise the likely effects. Particular care will be taken at watercourse crossings along the Proposed Grid Connection. Section 8 of BS 5228-1:2009+A1:2014 recommends a number of simple control measures as summarised below that will be employed onsite:</p> <ul style="list-style-type: none"> <li>➤ Keep local residents informed of the proposed working schedule, where appropriate, including the times and duration of any abnormally noisy activity that may cause concern;</li> <li>➤ All vehicles and mechanical plant will be fitted with effective exhaust silencers and be subject to programmed maintenance;</li> <li>➤ Select inherently quiet plant where appropriate - all major compressors will be ‘sound reduced’ models fitted with properly lined and sealed acoustic covers, which will be kept closed whenever the machines are in use;</li> </ul> |              |                 |

| Ref. M no.               | Reference Heading       | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|                          |                         |                    | <ul style="list-style-type: none"> <li>➤ All ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers;</li> <li>➤ Machines will be shut down between work periods (or when not in use) or throttled down to a minimum;</li> <li>➤ Regularly maintain all equipment used onsite, including maintenance related to noise emissions;</li> <li>➤ Vehicles will be loaded carefully to ensure minimal drop heights so as to minimise noise during this operation; and</li> <li>➤ All ancillary plant such as generators and pumps will be positioned so as to cause minimum noise disturbance and if necessary, temporary acoustic screens or enclosures will be provided</li> </ul>                                                                                                                                                                                                                                                                                                             |              |                 |
| <b>Operational Phase</b> |                         |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |
| MM115                    | Operational Phase Noise | EIAR Chapter 12    | <p>Whilst it is not possible to predict if OAM will occur, in the event that complaints are received regarding OAM, mitigation measures are available. The design of such mitigation measures can only be determined once the Proposed Wind Farm is operational if OAM is found to occur frequently and at sustained levels. For the Proposed Project, the developer is committed to investigating noise complaints, inclusive of any complaint which may relate to OAM (i.e. beyond overall noise levels found in planning conditions). To deal with the eventuality of a complaint, the developer proposes the following:</p> <ul style="list-style-type: none"> <li>➤ A community liaison officer will be appointed prior to first generation of electricity and contact details made publicly available;</li> <li>➤ Any complaint relating to noise can be reported to the community liaison officer, who will undertake an initial screening of the complaint (review of logs submitted, review of wind conditions and turbine data etc..) and</li> </ul> |              |                 |

| Ref. M no.                   | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|                              |                   |                    | <p> speak to the complainant in person, with an eventual visit to the complainant location if possible; </p> <ul style="list-style-type: none"> <li> Following initial screening, the community liaison officer will be responsible for commissioning a detailed noise complaint investigation. This will include appointing a qualified acoustic consultant to undertake noise measurements at the complaint location and quantify the occurrence and depth (in dB) of OAM for every 10 minute of the measurement campaign. The measured 10 minute noise levels and OAM depth would also be correlated with 10 minute wind conditions and operational data to find patterns; and, </li> <li> If frequent and sustained OAM is found, then appropriate mitigation would be designed and implemented and the complainant informed by the community liaison officer. Mitigation measures considered would include: changes to the operation of the relevant wind turbine(s) by changing software parameters such as blade pitch for specific wind conditions and time periods, addition of blade furniture (such as vortex generators) to alter the flow of air over the wind turbine blades; and, in extreme cases, targeted wind turbine shutdowns in specific conditions. </li> </ul> <p> For the BESS, an acoustic fence has been included within the design to reduce noise emission levels at the most sensitive NSRs, which are located to the northwest. The fencing has been modelled at a height of 4 m around the northwestern perimeter of the Site. Further detail is provided in Section 5.2 of Appendix 12-3 </p> |              |                 |
| <b>Decommissioning Phase</b> |                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |

| Ref. M no.                               | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Audit Result | Action Required |
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| MM116                                    | Noise             | EIAR Chapter 12    | Activities related to decommissioning would use similar plant to that used for construction activities and would occur at the same locations, as such noise level output during the decommissioning phase is expected to be no higher than the construction phase. Therefore, no significant noise and vibration effects are anticipated for the construction and decommissioning phases. Good practice during construction and decommissioning is recommended to minimise any potential noise impacts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |
| <b>EIAR Chapter 14 Cultural Heritage</b> |                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |
| <b>Pre-construction Phase</b>            |                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |
| MM117                                    | Cultural Heritage | EIAR Chapter 14    | <p>➤ Prior to the commencement of construction, a programme of targeted geophysical survey will be carried out at the location of the proposed temporary construction compound to investigate CH63, a curvilinear anomaly identified from aerial photography. The geophysical survey will be carried out under licence to the National Monuments Service of the DHLGH. Dependent on the results of the geophysical survey, further mitigation may be required. Any further mitigation will require agreement from the DHLGH.</p> <p>➤ Prior to the commencement of construction, a programme of targeted archaeological test trenching will be carried out at the accessible locations of proposed infrastructure, including the proposed turbine hardstands, temporary construction compound, 110kV substation and BESS compound and along the access roads and TDR accommodation area. Archaeological test trenching will also assess the site of previously unidentified cultural heritage receptor CH58. Archaeological test trenching will be carried out under licence to the National Monuments Service of the DHLGH.</p> |              |                 |

| Ref. M no.                | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Audit Result | Action Required |
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|                           |                   |                    | Dependent on the results of the testing assessment, further mitigation may be required, such as preservation by record or in-situ and/or archaeological monitoring. Any further mitigation will require agreement from the DHLGH.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |
| <b>Construction Phase</b> |                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |
| MM118                     | Cultural Heritage | EIAR Chapter 14    | <ul style="list-style-type: none"> <li>➤ All interventions that are required along townland boundaries, as part of the construction of the proposed development, will be subject to archaeological monitoring, to include a full record of the sections of townland boundaries that are removed. This work will be carried out under licence to the National Monuments Service of the DHLGH.</li> <li>➤ All topsoil stripping associated with the Proposed Wind Farm, including site investigation, will be subject to archaeological monitoring. This work will be carried out under licence to the National Monuments Service of the DHLGH. If archaeological remains are identified during the course of these works further mitigation may be required, such as preservation by record or in-situ. Any further mitigation will require agreement from the DHLGH.</li> <li>➤ The excavation of the Proposed Grid Connection within the Zone of Notification of AH2 and AH3 will be monitored. This work will be carried out under licence to the National Monuments Service of the DHLGH. If archaeological remains are identified during the course of these works further mitigation may be required, such as preservation by record or in-situ. Any further mitigation will require agreement from the DHLGH.</li> <li>➤ Upstanding elements of cultural heritage receptors subject to direct, negative (permanent) impacts (CH14, CH40, CH58) will be surveyed and a written and photographic record compiled prior to the commencement of construction</li> </ul> |              |                 |

| Ref. M no.                             | Reference Heading                     | Reference Location                      | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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| MM119                                  | Cultural Heritage                     | EIAR Chapter 14                         | <p>It is noted that natural screening, boundaries, buildings and vegetation are not taken into account in the ZTV model and therefore potential visual effects are likely to be less severe. It is noted that indirect effects are not permanent and would be removed following the decommissioning and removal of the turbines.</p> <p>➤ It is not possible to mitigate indirect effects on the archaeological, architectural and cultural heritage resource, due to the nature and scale of the proposed turbines within the landscape. It is noted that effects are not permanent and would be removed following the decommissioning and removal of the turbines.</p>                                                                    |              |                 |
| <b>Chapter 13 Landscape and Visual</b> |                                       |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |
| <b>Construction Phase</b>              |                                       |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |
| MM120                                  | Landscape Effects during Construction | EIAR Chapter 13<br><br>Section 13.7.2.1 | <p>The above predicted landscape effects during construction assume the implementation of the following mitigation measures for the Proposed Wind Farm and Proposed Grid Connection. All construction activities will follow best practice methods to reduce impacts upon the environment and landscape of the Site. Further details are presented in the Construction and Environmental Management Plan (CEMP) contained in <i>Appendix 4-5</i> of this EIAR. The following measures are to be implemented to mitigate landscape effects during the construction phase of the Proposed Project:</p> <p>➤ In all circumstances, excavation depths and volumes will be minimised, and excavated material will be re-used where possible.</p> |              |                 |

| Ref. M no.               | Reference Heading                  | Reference Location                        | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Audit Result | Action Required |
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|                          |                                    |                                           | <ul style="list-style-type: none"> <li>➤ For the Proposed Grid Connection, where the cable trench is to be located in the road verge, subsoil should be piled on site and re-used after cabling works.</li> <li>➤ Should any mature vegetation be removed, it should be replaced with the same or similar species whenever it is not possible to salvage and reinstate.</li> <li>➤ New topsoil should be provided should the existing topsoil not be of sufficient standard.</li> </ul> <p>Any areas of bare soil remaining after the landscaping phase will be seeded as soon as possible with a grass-seed mix to minimise sediment run-off.</p>                                                                                                                                                                                                                                                |              |                 |
| <b>Operational Phase</b> |                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                 |
| MM121                    | Landscape Effects during Operation | EIAR Chapter 13<br><br>Section 13.7.3.1.3 | <p>The Biodiversity Management and Enhancement Plan (BMEP) which has been prepared as part of this EIAR (see <i>Appendix 6-4</i>) will have the dual effect of providing ecological enhancement to the landscape area of the Proposed Wind Farm site as well as potential screening of some lower lying infrastructure of the Proposed Wind Farm, thereby ultimately mitigating effects on landscape character during the operational phase.</p> <p>The following measures from the BMEP which have been included in the Proposed Wind Farm design are deemed to have the effect of avoiding or reducing direct effects on landscape receptors, meaning individual landscape features and the landscape character of the Proposed Wind Farm site as a whole:</p> <ul style="list-style-type: none"> <li>➤ Riparian vegetation planting along rivers and drains, e.g. willow and alder,</li> </ul> |              |                 |

| Ref. M no.                                          | Reference Heading                                           | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Audit Result | Action Required |
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|                                                     |                                                             |                    | <ul style="list-style-type: none"> <li>➤ Converting grasslands into long-flowering meadows to allow natural revegetation,</li> <li>➤ Creation of peat and spoil repository areas to control run-off and allow natural recolonisation with seed banks and scrub,</li> <li>➤ Development of bog woodland habitat on uncut raised bog and cutover bog to allow regeneration of native tree species,</li> <li>➤ Hedgerow replanting,</li> <li>➤ Removal of conifer plantation and creation of native woodland areas,</li> </ul> <p>Creation of embankments around Proposed Wind Farm infrastructure to allow recolonisation of vegetation.</p> |              |                 |
| <b>Chapter 15 Material Assets - Traffic</b>         |                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |
| <b>Pre-Construction, Construction and Operation</b> |                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |
| MM122                                               | Traffic                                                     | Chapter 15         | <p><b>Mitigation by Design</b></p> <ul style="list-style-type: none"> <li>➤ Selection of the most appropriate delivery route to transport the wind turbine components, requiring the minimum remedial works to accommodate the vehicles as set out in Section 15.1.9.</li> <li>➤ Selection of the shortest underground grid connection route, minimising the impacts on the existing road network and traffic.</li> <li>➤</li> </ul>                                                                                                                                                                                                       |              |                 |
| MM123                                               | Mitigation Measures During the Construction Stage (Traffic) | Chapter 15         | The successful completion of the Proposed Project will require significant coordination and planning and a comprehensive set of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
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|            |                   |                    | <p>mitigation measures will be put in place before and during the construction stage in order minimize the effects of the additional traffic generated by the Proposed Project. A detailed <b>Traffic Management Plan (TMP)</b>, incorporating all the mitigation measures included as Appendix 15-2 of this EIAR, will be finalised and confirmatory detailed provisions in respect of traffic management agreed with the road's authority and An Garda Síochána prior to construction works commencing on Site. In addition, the traffic management measures proposed for the following construction traffic scenarios are set out for the grid connection in Appendix 15-2: Traffic Management Plan for Cooloo Wind Farm Development;</p> <ul style="list-style-type: none"> <li>➤ Delivery of Abnormally sized loads,</li> <li>➤ Management of Standard HGVs on R332 leading to site,</li> <li>➤ Traffic management measures during construction of cable grid connection</li> </ul> <p>The detailed TMP will include the following:</p> <p><b>Traffic Management Coordinator</b> – a competent Traffic Management Co-ordinator will be appointed for the duration of the construction of the Proposed Project and this person will be the main point of contact for all matters relating to traffic management.</p> <p><b>Delivery Programme</b> – a programme of deliveries will be submitted to Galway County Council and other relevant authorities in advance of deliveries of turbine components to the Proposed Wind Farm site. Liaison with the relevant local authorities including the roads sections of local authorities that the delivery routes traverse and An Garda Síochána, during the delivery phase of the large turbine vehicles, when an escort for all convoys will be required.</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Audit Result | Action Required |
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|            |                   |                    | <p><b>Information to locals</b> – Locals in the area will be informed of any upcoming traffic related matters e.g. delivery of turbine components at night, or traffic diversions during the construction of the grid connection, via letter drops and posters in public places. Information will include the contact details of the Contract Project Co-ordinator, who will be the main point of contact for all queries from the public or local authority during normal working hours. An "out of hours" emergency number will also be provided.</p> <p><b>A Pre and Post Construction Condition Survey</b> – A pre-condition survey of roads associated with the Proposed Project will be carried out prior to construction commencement to record the condition of the roads. A post construction survey will be carried out after works are completed. Where required the extent and timing of these surveys will be agreed with the local authority. This will include the implementation of temporary alterations to road network at critical junctions, as highlighted in Section 15.1.9.</p> <p><b>Identification of delivery routes</b> – These routes will be agreed and adhered to by all contractors.</p> <p><b>Travel plan for construction workers to Proposed Wind Farm site</b>– While the assessment above has assumed the worst case that construction workers will drive to the Proposed Wind Farm site, the construction company will be required to provide a travel plan for construction staff, which will include the identification of a routes to / from the site and identification of an area for parking.</p> <p><b>Travel plan for construction workers to underground electric cabling route</b> – Due to the transient nature of the underground grid</p> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
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|            |                   |                    | <p>connection construction site which will generally be on a section of the public road, construction workers will be transported to and from the site by the construction company at the beginning and end of each shift.</p> <p><b>Drivers conduct</b> – All drivers will follow normal rules of the road and will receive toolbox talk regarding the delivery route and planned holding points prior to any deliveries.</p> <p><b>Standard permitted axial loads</b> – Will not be exceeded.</p> <p><b>Temporary traffic signs</b> – As part of the traffic management measures temporary traffic signs will be put in place at all key junctions, including the access junction on the R332 during the 18 month construction period. All measures will be in accordance with the “<i>Traffic Signs Manual, Section 8 – Temporary Traffic Measures and Signs for Road Works</i>” (DoT now DoTT&amp;S) and “<i>Guidance for the Control and Management of Traffic at Roadworks</i>” (DoTT&amp;S). A member of construction staff (flagman) will be present at the access junction on the R332 during the 9 days on which the concrete turbine foundations are poured and at the site access crossing locations on the L6506 and L6301 during all delivery days during the construction phase.</p> <p><b>Delivery times of large turbine components</b> - The management plan will include the delivery of large wind turbine plant components at night in order to minimise disruption to general traffic during the construction stage.</p> <p><b>Re-instatement works</b> - All road surfaces and boundaries will be re-instated to pre-development condition, as agreed with the local</p> |              |                 |

| Ref. M no.                                                                                                | Reference Heading          | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Audit Result | Action Required |
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|                                                                                                           |                            |                    | <p>authority engineers. All works will be done in accordance with the Guidelines for the Opening, Backfilling and Reinstatement of Openings in Public Roads, DTToS, September 2015.</p> <p><b>Additional measures</b> - Various additional measures will be put in place in order to minimise the effects of the development traffic on the surrounding road network including wheel washing facilities on Site and sweeping / cleaning of local roads as required.</p> <p>➤ It is confirmed that details for the Traffic Management Plan for the Proposed Project will be agreed with the Road Section of Galway County Council prior to construction and contact will be maintained with the Road and Traffic Section throughout the construction phase.</p> |              |                 |
| MM124                                                                                                     | General Traffic Management | EIAR Chapter 15    | <p>➤ In the event that the Proposed Project is decommissioned after the 35 years of operation, a decommissioning plan, will be prepared for agreement with the local authority, as described in Chapter 4 and Appendix 4-6 Decommissioning Plan. This plan will include a material recycling / disposal and traffic management plan will be prepared for agreement with the local authority prior to decommissioning, in accordance with Scottish Natural Heritage report (SNH) Research and Guidance on Restoration and Decommissioning of Onshore Wind Farms (SNH, 2013</p>                                                                                                                                                                                  |              |                 |
| <p><b>Chapter 15 Other Material Assets</b></p> <p><b>Pre-Construction, Construction and Operation</b></p> |                            |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Audit Result | Action Required |
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| MM125      | Telecommunication | EIAR Chapter 15    | <p>In the event of interference occurring to telecommunications, the 2006 Guidelines acknowledge that <i>‘electromagnetic interference can be overcome’</i> by the use of divertor relay links out of line with the wind farm.</p> <p>As summarised in Section 15.2.5 above, following the analysis included in the TIA in Appendix 15-4, mitigation measures implemented include the micro-siting of T07 in order to minimise obstruction of ESB links. In order to address the potential impact on the Three Ireland link, the following mitigation measures are proposed:</p> <ul style="list-style-type: none"> <li>➤ Relay the Three Ireland radio link between Cloonriddia and Moylough via an existing Telecoms Mast (i.e. Creevagh). This would involve the installation of two microwave radio links: <ul style="list-style-type: none"> <li>○ PTP radio between Cloonriddia and Creevagh</li> <li>○ PTP radio between Creevagh and Moylough</li> </ul> </li> <li>➤ Once-off installation of two microwave radio links to be covered by the wind farm developer are estimated to be in the order of €10,000 - €15,000</li> <li>➤ The proposed mitigation measure would involve supply and provisioning of the <ul style="list-style-type: none"> <li>○ 2 no microwave radio links including radio antennas, cables connectors, etc.</li> <li>○ Rigging and Installation Services</li> <li>○ Design &amp; Commissioning Services</li> </ul> </li> </ul> |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Audit Result | Action Required |
|------------|-------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|
|            |                   |                    | <p>Should the Proposed Project receive a grant of permission, the Applicant will continue consultation and seek an agreement with Three Ireland in advance of the construction and operation of the Proposed Project.</p> <ul style="list-style-type: none"> <li>➤ Prior to the construction of the Proposed Wind Farm, A protocol agreement will be signed between 2rn and the Applicant. The Protocol Document ensures that in the event of any interference occurring to television or radio reception due to operation of the Proposed Wind Farm, the required measures, as set out in the Protocol Document, will be carried out by the Applicant to rectify this. The Protocol Document ensures that the appropriate mitigation is carried out in the event of unanticipated broadcast interference arising to television or radio reception as a result of the Proposed Wind Farm</li> </ul> |              |                 |
| MM126      | Aviation          | EIAR Chapter 15    | <p>Irish Aviation Authority</p> <ul style="list-style-type: none"> <li>➤ Agree an aeronautical obstacle warning light scheme for the wind farm development</li> <li>➤ Provide as-constructed coordinates in WGS84 format together with ground and blade tip height elevations at each wind turbine location and</li> <li>➤ Notify the Authority of intention to commence crane operations with at least 30 days prior notification of their erection.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                 |

| Ref. M no. | Reference Heading | Reference Location | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Audit Result | Action Required |
|------------|-------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|
|            |                   |                    | <p><i>Department of Defence</i></p> <ul style="list-style-type: none"> <li>➤ All turbines should be illuminated by Type C, Medium intensity, Fixed Red obstacle lighting with a minimum output of 2,000 candela to be visible in all directions of azimuth and to be operational H24/7 days a week.</li> <li>➤ Obstacle lighting should be incandescent. If LED or other lighting types are used, should be a type visible to Night Vision equipment. Obstacle lighting must emit light at the near Infra-Red (IR) range of the electromagnetic spectrum, specifically at or near 850 nanometres (nm) of wavelength.</li> <li>➤ Light intensity to be of similar value to that emitted in the visible spectrum of light.</li> <li>➤ Any Irish Air Corps (IAC) requirements are separate to Irish Aviation Authority (IAA) requirements.</li> </ul> |              |                 |
| MM127      | Waste Management  | EIAR Chapter 15    | <ul style="list-style-type: none"> <li>➤ It is not anticipated that any significant volume of waste will be generated within the Site during the operational phase of the Proposed Project as only a small number of operational and maintenance personnel will be present on within the Proposed Wind Farm site certain times. Any waste generated due to the operation and maintenance of the Proposed Project will be disposed of in a covered skip, located within the on-site substation compound. The waste material will be transferred to a Materials Recovery Facility (MRF) by a fully licenced waste contractor where the waste will be sorted into individual waste stream for recycling, recovery or disposal.</li> </ul>                                                                                                             |              |                 |
| MM128      | Decommissioning   | EIAR Chapter 15    | <ul style="list-style-type: none"> <li>➤ The measures outlined for the construction phase are considered the same for the decommissioning phase.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |

18.3

## EIAR Monitoring Measures

Table 18-2 Schedule of Monitoring

| Ref. No.                      | Reference Heading    | Reference Location               | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Frequency | Reporting Period | Responsibility               |
|-------------------------------|----------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------|------------------------------|
| <b>Pre-Construction Phase</b> |                      |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |                  |                              |
| MX1                           | Drainage Maintenance | EIAR Chapter 4<br>CEMP Section 4 | <ul style="list-style-type: none"> <li>&gt; An inspection and maintenance plan for the drainage system onsite will be prepared in advance of commencement of any works on the Proposed Project. Regular inspections of all installed drainage features will be necessary, especially after heavy rainfall, to check for blockages, and ensure there is no build-up of standing water at parts of the systems where it is not intended. The inspection of the drainage system will be the responsibility of the ECoW or the Project Hydrologist. The drainage inspection and maintenance plan are included in the CEMP in Appendix 4-5 of this EIAR.</li> <li>&gt; If necessary, any excess sediment build up behind check dams will be removed. For this reason, check dams will be inspected and maintained weekly during the construction phase of the Proposed Project to insure adequate performance. Maintenance checks will also ensure the centre elevation of the dam remains lower than the sides of the dam.</li> <li>&gt; Check dams will also be inspected weekly during the construction phase of the Proposed Project and following rainfall events to ensure the structure of the dam is still effective in controlling flow. Any scouring around the edges of the check dams or overtopping of</li> </ul> | On going  | Monthly          | Project Hydrologist/<br>ECoW |

| Ref. No. | Reference Heading | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Frequency   | Reporting Period | Responsibility |
|----------|-------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|----------------|
|          |                   |                    | <p>the dam in normal flow conditions will be rectified by reinforcement of the check dam.</p> <ul style="list-style-type: none"> <li>➤ Drainage swales will be regularly inspected for evidence of erosion along the length of the swale. If any evidence of erosion is detected, additional check dams will be installed to limit the velocity of flow in the channel and reduce the likelihood of erosion occurring in the future.</li> <li>➤ Silt traps will be inspected weekly during the construction phase of the Proposed Project and following rainfall events. Inlet and outlets will be checked for sediment accumulation and anything else that might interfere with flows.</li> <li>➤ The frequency of drainage system inspections will be reduced following completion of the construction phase of the Proposed Project. The Project Hydrologist will inspect and review the drainage system after construction has been completed to provide guidance on the requirements of an operational phase drainage system.</li> </ul> |             |                  |                |
| MX2      | Tree Felling      | EIAR Chapter 9     | Sampling will be completed before, during (if the operation is conducted over a protracted time) and after the felling activity. The ‘before’ sampling will be conducted within 4 weeks of the felling activity commencing, preferably in medium to high water flow conditions. The “during” sampling will be undertaken once a week or after rainfall events. The ‘after’ sampling will comprise as many samplings as necessary to demonstrate that water quality has returned to pre-activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | As Required | Monthly          | ECoW           |

| Ref. No. | Reference Heading | Reference Location                     | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Frequency | Reporting Period | Responsibility    |
|----------|-------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------|-------------------|
|          |                   |                                        | <p>status<br/>(i.e., where an impact has been shown).</p> <p>Criteria for the selection of water sampling points include the following:</p> <ul style="list-style-type: none"> <li>➤ Avoid man-made ditches and drains, or watercourses that do not have year-round flows, i.e. avoid ephemeral ditches, drains or watercourses;</li> <li>➤ Select sampling points upstream and downstream of the forestry activities;</li> <li>➤ It is advantageous if the upstream location is outside/above the forest in order to evaluate the impact of land-uses other than forestry;</li> <li>➤ Where possible, downstream locations will be selected: one immediately below the forestry activity, the second at exit from the forest, and the third some distance from the second (this allows demonstration of no impact through dilution effect or contamination by other land-uses where impact increases at third downstream location relative to second downstream location); and,</li> <li>➤ The above sampling strategy will be undertaken for all on-site sub-catchments streams where tree felling is proposed.</li> </ul> <p>Also, daily surface water monitoring forms will also be utilised at every works site near any watercourse. These will be taken daily and kept on site for record and inspection</p> |           |                  |                   |
| MX3      | Invasive Species  | EIAR<br>Chapter 6<br>CEMP<br>Section 3 | <ul style="list-style-type: none"> <li>➤ A pre-commencement invasive species survey shall be completed for the site.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Once      | As required      | Project Ecologist |

| Ref. No.                  | Reference Heading | Reference Location     | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Frequency | Reporting Period | Responsibility        |
|---------------------------|-------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------|-----------------------|
| MX4                       | Ornithology       | ELAR Chapter 7         | Pre-construction surveys will be undertaken prior to the initiation of works at the Proposed Wind Farm. The survey will include a thorough walkover survey to a 500m radius of the Proposed Wind Farm footprint and all works areas, where access allows. If winter roosting or breeding activity of birds of high conservation concern is identified, the roost or nest site will be located and earmarked for monitoring at the beginning of the first winter or breeding season of the construction phase. If it is found to be active during the construction phase, no works shall be undertaken within a disturbance buffer in line with industry best practice (e.g. Forestry Commission Scotland, 2006; Ruddock and Whitfield, 2007; Goodship and Furness, 2022). No works shall be permitted within the buffer until it can be demonstrated that the roost/nest is no longer occupied. | Once      | As required      | Project Ornithologist |
| <b>Construction Phase</b> |                   |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |                  |                       |
| MX5                       | Health and Safety | ELAR Chapter 5, CEMP 5 | <p>The PSCS appointed for the construction stage shall be required to perform his/her duties as prescribed in the Safety, Health and Welfare at Work (Construction) Regulations. These duties include (but are not limited to):</p> <ul style="list-style-type: none"> <li>➤ Development of the Safety and Health Plan for the construction stage with updating where required as work progresses;</li> <li>➤ Compile and develop safety file information</li> <li>➤ Reporting of accidents / incidents;</li> <li>➤ Weekly site meeting with PSCS;</li> <li>➤ Coordinate arrangements for checking the implementation of safe working procedures. Ensure that the following are being carried out:</li> <li>➤ Induction of all site staff including any new staff enlisted for the project from time to time;</li> </ul>                                                                        | Daily     | Daily            | PSCS                  |

| Ref. No. | Reference Heading            | Reference Location            | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Frequency   | Reporting Period | Responsibility |
|----------|------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|----------------|
|          |                              |                               | <ul style="list-style-type: none"> <li>➤ Toolbox talks as necessary;</li> <li>➤ Maintenance of a file which lists personnel on site, their name, nationality, current Safe Pass number, current Construction Skills Certification Scheme (CSCS) card (where relevant) and induction date;</li> <li>➤ Report on site activities to include but not limited to information on accidents and incidents, disciplinary action taken and PPE compliance;</li> <li>➤ Monitor the compliance of contractors and others and take corrective action where necessary; and</li> <li>➤ Notify the Authority and the client of non-compliance with any written directions issued</li> </ul>                                                                                                                       |             |                  |                |
| MX6      | Water Quality and Monitoring | EIAR Chapter 9 CEMP Section 4 | <p>During the construction phase, the Project Contractor will be responsible for the effectiveness of drainage measures. This responsibility extends to drainage maintenance, to ensure that the installed drainage measures continue to perform as intended by the detailed drainage design. Silt fences, check dams, level spreaders and other drainage measures likely to form part of the detailed drainage design, require regular maintenance to ensure they continue to function effectively, and the Project Contractor is entirely responsible for this maintenance.</p> <p>The drainage measures installed on-site should be inspected at least weekly by the contractor and maintained as required during the construction phase of the Proposed Project to ensure good performance.</p> | As required | As Necessary     | ECoW           |
| MX7      | Water Quality and Monitoring | EIAR Chapter 9 CEMP Section 4 | <ul style="list-style-type: none"> <li>➤ Sampling will be completed before, during (if the operation is conducted over a protracted time) and after the felling activity. The 'before' sampling will be</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | As Required | As Necessary     | ECoW           |

| Ref. No. | Reference Heading     | Reference Location            | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Frequency   | Reporting Period | Responsibility |
|----------|-----------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|----------------|
|          |                       |                               | <p>conducted within 4 weeks of the felling activity commencing, preferably in medium to high water flow conditions. The “during” sampling will be undertaken once a week or after rainfall events. The ‘after’ sampling will comprise as many samplings as necessary to demonstrate that water quality has returned to pre-activity status</p> <ul style="list-style-type: none"> <li>➤ (i.e., where an impact has been shown).</li> <li>➤ Criteria for the selection of water sampling points include the following:</li> <li>➤ Avoid man-made ditches and drains, or watercourses that do not have year-round flows, i.e. avoid ephemeral ditches, drains or watercourses;</li> <li>➤ Select sampling points upstream and downstream of the forestry activities;</li> <li>➤ It is advantageous if the upstream location is outside/above the forest in order to evaluate the impact of land-uses other than forestry;</li> <li>➤ Where possible, downstream locations will be selected: one immediately below the forestry activity, the second at exit from the forest, and the third some distance from the second (this allows demonstration of no impact through dilution effect or contamination by other land-uses where impact increases at third downstream location relative to second downstream location); and,</li> <li>➤ The above sampling strategy will be undertaken for all on-site sub-catchments streams where tree felling is proposed.</li> </ul> |             |                  |                |
| MX11     | Surface Water Quality | EIAR Chapter 9 CEMP Section 4 | Daily monitoring of excavations by a suitably qualified person will occur during the construction phase. If high levels of seepage inflow occur, excavation work will immediately be stopped and a geotechnical assessment undertaken;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | As Required | Monthly          | ECoW           |

| Ref. No. | Reference Heading               | Reference Location               | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Frequency   | Reporting Period | Responsibility    |
|----------|---------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|
| MX12     | Tree Felling                    | EIAR Chapter 9                   | <p>Checking and maintenance of roads and culverts will be on-going through any felling operation. No tracking of vehicle through watercourses will occur, as vehicles will use road infrastructure and existing watercourse crossing points. Where possible, existing drains will not be disturbed during felling works.</p> <p>Also, regular surface water monitoring forms (for visual inspections and field chemistry measurements) will also be utilised at every works site near any watercourse. These will be taken regularly and kept on site for record and inspection.</p> | As Required | Monthly          | ECoW              |
| MX13     | Plant and Equipment Inspections | EIAR Chapter 9<br>CEMP Section 4 | <ul style="list-style-type: none"> <li>➤ The plant used during construction will be regularly inspected for leaks and fitness for purpose; and,</li> <li>➤ An emergency plan for the construction phase to deal with accidental spillages will be included within the Construction and Environmental Management Plan (<b>Appendix 4.4</b>). Spill kits will be available to deal with and accidental spillage in and outside the re-fuelling area.</li> </ul>                                                                                                                        | As Required | Monthly          | ECoW              |
| MX14     | Traffic and Transport           | CEMP Section 3                   | <ul style="list-style-type: none"> <li>➤ The agreed haul route roads adjacent to the site will be regularly inspected for cleanliness and cleaned as necessary.</li> <li>➤ The roads adjacent to the site entrances will be checked weekly or damage/potholes and repaired as necessary.</li> <li>➤ The transport of construction materials around the Site from the nearby quarry facilities will be covered by tarpaulin where necessary.</li> </ul>                                                                                                                               | As required | Monthly          | ECoW              |
| MX15     | Biodiversity                    | CEMP Section 4                   | The Project Ecologist will be available to support the ECoW on matters relating to the protection of sensitive habitats and species encountered prior to or during the construction phase                                                                                                                                                                                                                                                                                                                                                                                            | As required | As required      | Project Ecologist |

| Ref. No. | Reference Heading | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Frequency   | Reporting Period | Responsibility      |
|----------|-------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|---------------------|
|          |                   |                    | <p>of the Proposed Project. The Project Ecologist will not be full time on site but will undertake pre-commencement surveys and visit the site as required. The responsibilities and duties of the Project Ecologist/Ornithologist will include the following:</p> <ul style="list-style-type: none"> <li>➤ Undertake a pre-construction transect/walkover bird survey to ensure that significant effects on breeding birds will be avoided.</li> <li>➤ Inform and educate on-site personnel of the ornithological and ecological sensitivities within the Site.</li> <li>➤ Oversee management of ornithological and ecological issues during the construction period and advise on ornithological issues as they arise.</li> <li>➤ Provide guidance to contractors to ensure legal compliance with respect to protected species onsite.</li> <li>➤ Liaise with officers of consenting authorities and other relevant bodies with regular updates in relation to construction progress</li> </ul> |             |                  |                     |
| MX16     | Hydrology         | CEMP Section 4     | <p>The Project Hydrologist is part of the design team that will prepare the detailed drainage design for the construction phase of the Proposed Project, but will also support the ECoW in monitoring, overseeing and auditing the effective implementation of the detailed drainage design by the Project Contractor. The Project Hydrologist will not be full time on site but will be required to visit as necessary to oversee the implementation of their drainage design.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | As required | As required      | Project Hydrologist |

| Ref. No. | Reference Heading | Reference Location             | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Frequency   | Reporting Period | Responsibility        |
|----------|-------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|-----------------------|
|          |                   |                                | <p>The responsibilities and duties of the Project Hydrologist will include the following:</p> <ul style="list-style-type: none"> <li>➤ Preparation of detailed drainage design before construction commences;</li> <li>➤ Input to the CEMP in respect of drainage design and water quality management;</li> <li>➤ Attend site to support ECoW and oversee and audit the effective implementation of the detailed drainage design;</li> <li>➤ Complete ongoing inspection and monitoring of the Proposed Project, particularly in areas of drainage control in support of the ECoW in monitoring the effectiveness of the drainage design as it is implemented on-site.</li> </ul>                                                           |             |                  |                       |
| MX17     | Spoil Management  | EIAR Chapter 4, CEMP Section 2 | <p>The Geotechnical Engineer will report to the Construction Manager and is responsible for inspection and review of geotechnical aspects associated with construction of the Proposed Project. The Geotechnical Engineer will not be full time on site but will visit site at least once a month during the construction phase civil works and on a weekly basis during site preparation/groundworks.</p> <p>The responsibilities and duties of the Geotechnical Engineer will include the following:</p> <ul style="list-style-type: none"> <li>➤ Visit site regularly, or at least once a month during the construction phase, to complete geotechnical audits and reviews and report any issues to the Construction Manager;</li> </ul> | As required | As required      | Geotechnical Engineer |

| Ref. No. | Reference Heading         | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Frequency   | Reporting Period | Responsibility        |
|----------|---------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|-----------------------|
|          |                           |                    | <p>➤ Ensuring that identified hazards are listed in the Geotechnical Risk Register and that these are subject to ongoing monitoring; and,</p> <p>Ongoing inspection and monitoring of the Proposed Project, particularly in temporary stockpile areas, through all phases of construction (including pre, during and post construction) and ensure construction is carried out as specified in the EIAR, NIS and in relevant planning conditions</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                  |                       |
| MX18     | Archaeological Monitoring | EIAR Chapter 13    | <p>The Project Archaeologist will report to the Environmental Manager/ECOW and is responsible for archaeological monitoring of the site during the construction phase. This will include monitoring of site investigations and excavation works as well as the monitoring and metal detection of spoil during construction.</p> <p>➤ All interventions that are required along townland boundaries, as part of the construction of the proposed development, will be subject to archaeological monitoring, to include a full record of the sections of townland boundaries that are removed. This work will be carried out under licence to the National Monuments Service of the DHLGH.</p> <p>➤ All topsoil stripping associated with the Proposed Wind Farm, including site investigation, will be subject to archaeological monitoring. This work will be carried out under licence to the National Monuments Service of the DHLGH. If archaeological remains are identified during the course of these works further mitigation may be required, such as preservation by record or in-situ. Any further mitigation will require agreement from the DHLGH.</p> | As Required | As Required      | Project Archaeologist |

| Ref. No.                 | Reference Heading     | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Frequency | Reporting Period | Responsibility |
|--------------------------|-----------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------|----------------|
|                          |                       |                    | If new archaeological material is detected during the pre-construction re-inspection, testing or monitoring, the project archaeologist will be responsible for ensuring they are preserved by record (archaeologically excavated) and therefore permanently removed with a full record made.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                  |                |
| <b>Operational Phase</b> |                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                  |                |
| MX18                     | Surface Water Quality | CEMP Section 4     | <p>Visual inspection and laboratory analysis results of water quality monitoring shall assist in determining requirements for any necessary improvements in drainage controls and pollution prevention measures implemented on site.</p> <p>It will be the responsibility of the ECoW to present the ongoing results of water quality and weather monitoring at or in advance of regular site meetings.</p> <ul style="list-style-type: none"> <li>Reports on water quality will consider all field monitoring and visual inspections, and results of laboratory analysis completed for that period. Reports will describe how the results compare with baseline data as well as previous reports on water quality. The reports will also describe whether any deterioration or improvement in water quality has been observed, whether any effects are attributable to construction activities and what remedial measures, or corrective actions have been implemented. Any proposed</li> </ul> | Monthly   | Monthly          | ECoW           |

| Ref. No. | Reference Heading | Reference Location                                            | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Frequency     | Reporting Period | Responsibility    |
|----------|-------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|-------------------|
|          |                   |                                                               | alteration to sampling frequency will be agreed with the Planning Authority in advance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |                  |                   |
| MX20     | Bats              | <p>EIAR Chapter 6</p> <p>Appendix 6-2</p> <p>Appendix 6-4</p> | <p>Overall risk levels for high collision risk bat species were typically <i>Low</i>, with the exception of common pipistrelle which was <i>Medium</i> in spring. This risk level is reflective of the nature of the Proposed Wind Farm, which is predominantly characterised by agricultural grassland, wet grassland and peatland habitats with smaller areas of woodland, hedgerows, and treelines.</p> <p>Taking a precautionary approach and given that high collision risk was recorded at median and peak activity levels, an adaptive monitoring and mitigation strategy has been devised for the Proposed <i>Project</i>, in line with the case study example provided in Appendix 5 of NatureScot (2021) and based on the site-specific data.</p> <p><b>Operational Monitoring</b></p> <p>To assess the effects of the Proposed <i>Project</i> on bat activity, at least 3 years of post-construction monitoring is proposed. Post-construction monitoring will include static detector surveys, walked survey transects and corpse searching to record any bat fatalities resulting from collision.</p> <p>The results of post-construction monitoring shall be utilised to assess any potential changes in bat activity patterns and to monitor the implementation of the mitigation strategy. If the monitoring identifies a curtailment requirement (i.e. significant bat fatalities encountered), a curtailment programme, in line with relevant guidelines, will be devised around key activity</p> | Years 1, 2, 3 | Annually         | Project Ecologist |

| Ref. No. | Reference Heading | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Frequency | Reporting Period | Responsibility |
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|          |                   |                    | <p>periods and weather parameters, as well as a potential increase in buffers.</p> <p>At the end of each year, the efficacy of the mitigation and monitoring plan will be reviewed, and any identified efficiencies incorporated into the programme. This approach allows for an evidence-based review of the potential for bat fatalities at the Proposed Wind Farm, post construction, to ensure that the necessary measures, based on a new baseline post-construction, are implemented for the protection of bat species locally. The effectiveness of any mitigation/curtailment needs to be monitored in order to determine (a) whether it is working effectively (i.e. the level of bat mortality is incidental), and (b) whether the curtailment regime can be refined such that turbine down-time can be minimised whilst ensuring that it remains effective at preventing casualties.</p> <p>The below subsections provide additional detail on the proposed survey effort, timing, and mitigation.</p> <p><b>Monitoring Year 1</b></p> <p><b>Bat activity surveys</b></p> <p>The post-construction surveys will be carried out as per the pre-construction survey effort. Static monitoring will take place at each turbine during the bat activity season (between April and October) (NatureScot, 2021, NIEA, 2021). Full spectrum recording detectors will be utilised for the same duration as during pre-application surveys and at the same density (NatureScot, 2021). As described in Section 3.5 above, the assessment of bat activity levels will include the use of ‘Ecobat’</p> |           |                  |                |

| Ref. No. | Reference Heading | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Frequency | Reporting Period | Responsibility |
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|          |                   |                    | <p>(or similar alternative), a web-based interface, allowing uploaded activity data to be contrasted with a comparable reference range, allowing objective and robust interpretation. Walked survey transects will also be conducted.</p> <p>Key weather parameters and other factors that are known to influence collision risk will be monitored and shall include:</p> <ul style="list-style-type: none"> <li>• Windspeed in m/s (measured at nacelle height)</li> <li>• Temperature (°C)</li> <li>• Precipitation (mm/hr)</li> </ul> <p><b>Carcass searches</b></p> <p>Carcass searches, to monitor and record bat fatalities, shall be conducted at each turbine in accordance with most recent guidance. This shall include searcher efficiency trials and an assessment of scavenger removal rates to determine the appropriate correction factor to be applied in relation to determining an accurate estimate of collision mortality. Surveys should cover all activity seasons and the use of a trained dog detection team will be carried out to ensure maximum efficiency.</p> <p><b>Monitoring Years 2 &amp; 3</b></p> <p>Monitoring surveys shall continue in Year 2 and 3, and where a curtailment requirement has been identified, the success of the curtailment strategy shall be assessed in line with the baseline data collected in the preceding year(s). The</p> |           |                  |                |

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| Ref. No. | Reference Heading | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Frequency | Reporting Period | Responsibility    |
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|          |                   |                    | <p>Monitoring results will be reported by a suitably experienced ecologist within an Annual Environmental Report. Any criteria failures will be identified, and corrective actions will be implemented. Reports detailing the monitoring works carried out, the results obtained and a review of their success, along with any suggestions for amendments to the Plan will be prepared. Specifically, the Plan will address the measures relating to hedgerow planting, marsh fritillary breeding habitat/ grassland creation, and the cutover peatland enhancement area. To confirm that habitat creation and enhancement has been successful, all areas of restored vegetation (replanted hedgerows) and enhanced habitats (grasslands) will be monitored post-restoration. This will be undertaken in partnership between the Developer, the Project Ecologist and the Landowners. The proposed management actions will be conveyed to each of the landowners and management alterations implemented as required to achieve the targets of the management plan.</p> <p>The Plan will be regularly updated and amended where necessary to improve the efficacy of the prescribed works.</p> <p><b>Grassland Monitoring</b></p> <p>Prior to the commencement of habitat enhancement measures, permanent, random vegetation monitoring plots will be agreed and established within the management areas (using GPS). This will allow the monitoring plots to be representative of microtopography and vegetation cover. Monitoring plots will be surveyed and classified using the relevé method as per Martin et al., (2018) with plot sizes being 2m x 2m. Biotic and abiotic parameters that form baseline indicators of ecological condition of the grassland will be recorded. The number of monitoring plots will be determined by the level of plant community heterogeneity identified during the baseline survey. However, it is envisaged that a minimum of three 2m x 2m</p> | Year 1-3  | Annually         | Project Ecologist |

| Ref. No. | Reference Heading | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Frequency                   | Reporting Period | Responsibility    |
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|          |                   |                    | <p>monitoring plots will be established at each of the enhanced areas. Grassland conditions assessed in both the short and long-term will be informed by O'Neill et al., (2013) and Martin et al., (2018). Monitoring should be carried out between July and September.</p> <p>The Monitoring Plan will be regularly updated and amended where necessary to improve the efficacy of the enhancement work. The number of monitoring plots may change depending on the results of the initial surveys</p> <p><b>Marsh Fritillary Enhancement Monitoring</b></p> <p>Prior to the commencement of habitat enhancement measures, marsh fritillary habitat suitability assessments will be carried out within the relevant areas. Habitat condition assessments include surveying along a predetermined route for the presence and abundance of devil's bit scabious as well as recording the vegetation height and any grazing evidence within the study site and is based on methodology and recording sheets designed by the National Biodiversity Data Centre . Monitoring should be carried out between August and September when devils bit scabious in flower. The habitat suitability condition assessments should be carried out in Years 1, 3, 5, 7, 10, 15 and 20 of the Plan. Following establishment of devils bit scabious within these areas, marsh fritillary habitat suitability assessments should additionally be carried out in these areas as part of the Monitoring Plan. The results of the marsh fritillary breeding habitat suitability assessments will inform whether adaptive management measures need to be introduced to improve the condition of the habitats for marsh fritillary.</p> <p>Monitoring surveys will also include presence/absence surveys for marsh fritillary larvae initially throughout the Monitoring Plan. These will be carried out in accordance with best practice guidance (NRA 2009) and the National Biodiversity Data Centre (NBDC) marsh</p> | Year 1, 3, 5, 7, 10, 15, 20 | Annually         | Project Ecologist |

| Ref. No. | Reference Heading | Reference Location             | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Frequency            | Reporting Period | Responsibility        |
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|          |                   |                                | fritillary survey methodologies for larval web surveys <sup>6</sup> . The optimum survey period for larvae is during August and September, in sunny conditions. Occupied larval webs will be recorded.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                  |                       |
| MX22     | Ornithology       | EIAR Chapter 7<br>Appendix 7-8 | <p>Operational monitoring will be undertaken in prescribed monitoring years during the operational lifetime of the Proposed Wind Farm. The NatureScot guidance document ‘Monitoring the impact of onshore wind farms on birds’ (SNH, 2009) requires that bird monitoring in wind farms should occur in years 1, 2, 3, 5, 10 and 15 after the turbines become operational. As mitigation is being undertaken at the Proposed Wind Farm site (refer to Appendix 7-7 Bird Mitigation Plan), there is an associated requirement for an increase in the frequency of monitoring surveys compared to guidance. Monitoring will be conducted continuously during the first 5 operational years. At the end of this period, the results will be reviewed and future monitoring needs and gaps will be identified to determine the frequency of monitoring in subsequent years (i.e., increased frequency or a return to the NatureScot guidance). The requirements for monitoring in subsequent years, including any decision to reduce the frequency of surveys, will be confirmed in writing with the Planning Authority and will include consultation with the National Parks and Wildlife Service, allowing an adaptive approach to monitoring.</p> <p><b>Surveys</b><br/>The ornithological surveys that will be undertaken during the prescribed monitoring years are listed below and the methodology is outlined in the following sections:</p> <ul style="list-style-type: none"> <li>➤ Vantage point surveys;</li> <li>➤ Barn owl box visit;</li> <li>➤ Collision monitoring.</li> </ul> | Years 1-5, 10 and 15 | Monthly          | Project Ornithologist |

| Ref. No. | Reference Heading   | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Frequency              | Reporting Period | Responsibility   |
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| MX23     | Noise and Vibration | Chapter 12         | <p>To undertake an assessment of the operational noise impact in accordance with the requirements of the WEDG 2006, the following steps are required:</p> <ul style="list-style-type: none"> <li>➤ Specify the location of the wind turbines for the Proposed Wind Farm;</li> <li>➤ Measure the background noise levels as a function of on-site wind speed at a selection of representative Noise Monitoring Locations (NML);</li> <li>➤ Establish for each NML the Total WEDG Noise Limits on analysis of the measured background noise levels;</li> <li>➤ Identify the locations of all nearby noise sensitive receptors and select a sample of relevant Noise Assessment Locations (NAL). For each NAL, identify the most representative measured background noise data;</li> <li>➤ Specify the likely noise emission characteristics of the wind turbines for the Proposed Wind Farm and all nearby cumulative wind turbines;</li> <li>➤ Calculate the likely noise immission levels due to the cumulative operation of all relevant wind turbines and compare it to the Total WEDG Noise Limits;</li> <li>➤ Determine the Site Specific Noise Limits, which take account of the noise limit already allocated to, or could theoretically be used by other schemes in the area; and</li> </ul> | Once within six months | As required      | Noise Consultant |

| Ref. No.                     | Reference Heading | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Frequency               | Reporting Period | Responsibility                     |
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|                              |                   |                    | <p>➤ Calculate the likely noise immission levels due to the operation of the Proposed Wind Farm on its own and compare it to the Proposed Wind Farm's Site Specific Noise Limits.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                         |                  |                                    |
| <b>Decommissioning Phase</b> |                   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                  |                                    |
| MX24                         | Decommissioning   | DP Section 1       | <p>In accordance with SNH guidance, <i>“best practice not to limit options too far in advance of actual decommissioning but to maintain informed flexibility until close to the end-of-life of the wind farm”</i>.</p> <p>A Decommissioning Plan will be reviewed and updated prior to commencement of decommissioning works to take account of the relevant conditions of the planning permission and current health and safety standards</p>                                                                                                                                                                                                                                                                                                                                                                                                                                              | End of operational life | As required      | Developer/<br>Appointed Contractor |
| MX25                         | Decommissioning   | DP Section 3       | <p>A Contractor will be appointed to undertake the decommissioning activities. The site manager and/or Environmental Clerk of Works (ECoW) will be key members of the Contractor's team and are the points of contact relating to decommissioning-related environmental issues.</p> <p>In general, the ECoW will maintain responsibility for monitoring the decommissioning works and Contractors/Sub-contractors from an environmental perspective. The ECoW will act as the regulatory interface on environmental matters. The Site Manager will be responsible for reporting to and liaising with GCC and other statutory bodies as required.</p> <p>The Site Manager in consultation with the ECoW will be responsible for employing the services of a suitably qualified ecologist and any other suitably qualified professionals as required throughout the decommissioning works</p> | As required             | As required      | Site Manager                       |
| MX26                         | Decommissioning   | DP Section 3       | <p>Prior to decommissioning, a suitably qualified ecologist will complete an invasive species survey of the Site to identify invasive species where any minor excavation will be required. If present in these areas, the ecologist will propose suitable management measures.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | As required             | As required      | Project Ecologist                  |

| Ref. No. | Reference Heading | Reference Location | Monitoring Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Frequency   | Reporting Period | Responsibility        |
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| MX27     | Decommissioning   | Appendix 7-6       | <p>It is proposed that decommissioning works will commence outside the bird nesting season (1st of March to 31st of August inclusive) to avoid the most sensitive time of the year for most bird species with the potential to use the site and its environs. Pre-commencement surveys will be undertaken within one month prior to the initiation of works. The purpose of these surveys is to identify sensitive roosting sites.</p> <p>If works run into the subsequent breeding season(s) (April-September), surveys will be conducted to identify sensitive nesting sites. Breeding season surveys will be conducted once per month from April to July inclusive when works are taking place. If works run into the subsequent winter season(s) (October to March), surveys will be repeated to identify sensitive roost sites. These surveys will be conducted at the beginning of each winter season (e.g., October).</p> <p>Surveys will be undertaken by a suitably qualified ornithologist. The survey will comprise a thorough walkover survey of the development footprint and/or all works areas to a 500m radius, where access allows. If winter roosts or nests of birds of high conservation concern are identified, the roost/nest will be earmarked for continued monitoring during works. If the roost/nest is found to be active during works, works will cease within a species-specific buffer of its location in line with best practice guidance (Forestry Commission Scotland, 2006; Goodship and Furness 2022; Ruddock and Whitfield, 2007) to avoid disturbance. No works shall be permitted within the buffer until it can be demonstrated that the roost/nest is no longer occupied. Aerial surveys using a drone may be used to confirm the presence or absence of birds, where conditions are suitable.</p> <p>All site staff and subcontractors will be made aware of any restrictions to be imposed by means of a toolbox talk and a map of the 'no-work zone' will be made available to all construction staff.</p> | As required | As required      | Project Ornithologist |

| Ref. No. | Reference Heading | Reference Location | Monitoring Measure                                                                                                  | Frequency | Reporting Period | Responsibility |
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|          |                   |                    | The restricted area will also be marked to alert all personnel on site to the suspension of works within that area. |           |                  |                |



## APPENDIX 1

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## APPENDIX 2

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