



## APPENDIX 4-8

### DECOMMISSIONING PLAN

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# 1. INTRODUCTION

This Decommissioning Plan (DP) has been developed by MKO on behalf of Lemanaghan Wind Farm DAC (the Applicant), to accompany an application for planning permission to An Coimisiún Pleanála for the Proposed Lemanaghan Wind Farm. For the purposes of this Environmental Impact Assessment Report (EIAR), the various project components are described and assessed using the following references: ‘Proposed Project’, Proposed Wind Farm’, ‘Proposed Grid Connection’, ‘Proposed Project site’, and ‘site’. Please see Section 1.1.1 of this EIAR for further details. A detailed description of the Proposed Project is provided in Chapter 4 of this EIAR.

This document was prepared alongside the EIAR and Natura Impact Statement (‘NIS’) which accompany the planning application for the Proposed Project to An Coimisiún Pleanála.

Decommissioning of the Proposed Wind Farm will be scheduled to take place after the proposed 35-year operational lifespan. The Proposed Grid Connection infrastructure will remain in place as it will be under the ownership and control of the ESB Networks and/or EirGrid and will form a permanent part of the national electricity grid.

As noted in the Scottish Natural Heritage report (SNH) ‘*Research and Guidance on Restoration and Decommissioning of Onshore Wind Farms*’ (SNH, 2013), reinstatement proposals for a wind farm are made approximately 30 years in advance, so within the lifespan of the wind farm, technological advances and preferred approaches to reinstatement are likely to change. According to the SNH guidance, it is therefore:

*“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”.*

In this regard, this 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.

This report provides the environmental management framework to be adhered to during the decommissioning phase of the Proposed Wind Farm, and it incorporates the mitigating principles to ensure that the work is carried out in a way that minimises the potential for any environmental impacts to occur.

## 1.1 Statement of Authority

This document was prepared by Catherine Johnson, with input from Aisling Thompson, and reviewed by Ellen Costello, all of MKO.

Catherine is a Project Environmental Scientist at MKO with over 3 years of consultancy experience in sustainability and renewable energy. Prior to joining MKO, Catherine worked as an Environmental Social Governance (ESG) analyst for Acasta in Edinburgh. Catherine has expertise in international climate law and policy, renewable energy, earth science, and sustainability/ESG processes. Catherine has a BSc in Earth and Ocean Science and an LLM in Global Environment and Climate Change Law.

Aisling is an Environmental Scientist with MKO with over 1 year of experience in both private practice and local authorities. Aisling holds a BSc in Applied Freshwater and Marine Biology and LLM Marine and Maritime Law. Prior to taking up her position with MKO in June 2025, Aisling worked as an Aquaculture technician with Mount Cook Alpine Salmon in New Zealand. Aisling has specialist knowledge in Environmental and Marine law and policy, Marine and freshwater laboratory skills, and Appropriate Assessments.

Ellen is a Senior Environmental Scientist with over 6 years of consultancy experience with MKO and has been involved in a number of wind energy EIAR applications involving the compilation of numerous chapters including chapters on Population and Human Health. Ellen holds a BSc. in Earth Science and a MSc. in Climate Change: Integrated Environmental and Social Science Aspects.

## 1.2 Scope of the Decommissioning Plan

This report is presented as a guidance document for the decommissioning of the Proposed Wind Farm. The Decommissioning Plan clearly outlines the mitigation measures and monitoring proposals that are required to be adhered to in order to complete the works in an appropriate manner.

The report is divided into nine sections, as outlined below:

**Section 1** provides a brief introduction as to the scope of the report.

**Section 2** outlines the site and Project details, detailing the targets and objectives of this plan and providing an overview of works methodologies that will be adopted throughout decommissioning.

**Section 3** sets out details of the environmental controls to be implemented on site including the mechanisms for implementation. A waste management plan is also included in this section.

**Section 4** outlines the general Health and Safety measures that will be implemented on site during the decommissioning phase of the Proposed Project.

**Section 5** outlines the Emergency Response Procedure to be adopted in the event of an emergency in terms of health and safety and environmental protection.

**Section 6** sets out a programme for the timing of the decommissioning phase works.

**Section 7** consists of a summary table of all mitigation measures to be adhered to during the decommissioning phase.

**Section 8** consists of a summary table of all monitoring requirements for the decommissioning phase.

**Section 9** outlines the proposals for reviewing compliance with the provisions of this report.

## 2. SITE AND PROJECT DETAILS

### 2.1 Site Location and Description

The Proposed Wind Farm is located approximately 3 kilometres (km) northeast of Ferbane and approximately 2.5 km southwest of the village of Ballycumber in Co. Offaly. Elevations within the Proposed Project site range from ~51 mOD (metres above Ordnance Datum) in the southwest of the site to ~48 m in the northeast of the site. The site is approximately 5.4 km in length at its longest point and 4.9 km in width at its widest point; the site encompasses an area of approximately 1,258 ha.

The Proposed Grid Connection will connect the Proposed Wind Farm to the national electricity grid. Underground electrical cables will transmit the power from each wind turbine to the proposed onsite 220kV substation. The Proposed Grid Connection will connect the Proposed Wind Farm into the national grid via the existing Shannonbridge-Maynooth 220kV Overhead Line (OHL) in the townland of Cooldorragh, measuring approximately 0.8 km in total length (comprising 0.4 km of OHL from the proposed steel masts for loop-in/loop-out of the existing OHL).

The landcover within the site is a mixture of bare cutaway peat, re-vegetated bare peat, degraded raised bog, scrub, low woodland and remnants of high bog. Current land use within the Proposed Wind Farm comprises natural recolonisation of cutaway and degraded bog and small areas of active turbary. Approximately 17km of Bord na Móna (BnM) permanent fixed-gauge rail lines can be found running through Lemanaghan Bog. Current land use along the Proposed Grid Connection comprises degraded raised bog and land principally used for agriculture. Land-use in the wider landscape of the site comprises of BnM landholdings, forestry, agricultural land, cutover and cutaway peatland, one-off rural housing and small village settlements

The townlands in which the Proposed Project is located are listed in Table 1-1 in Chapter 1 of this EIAR.

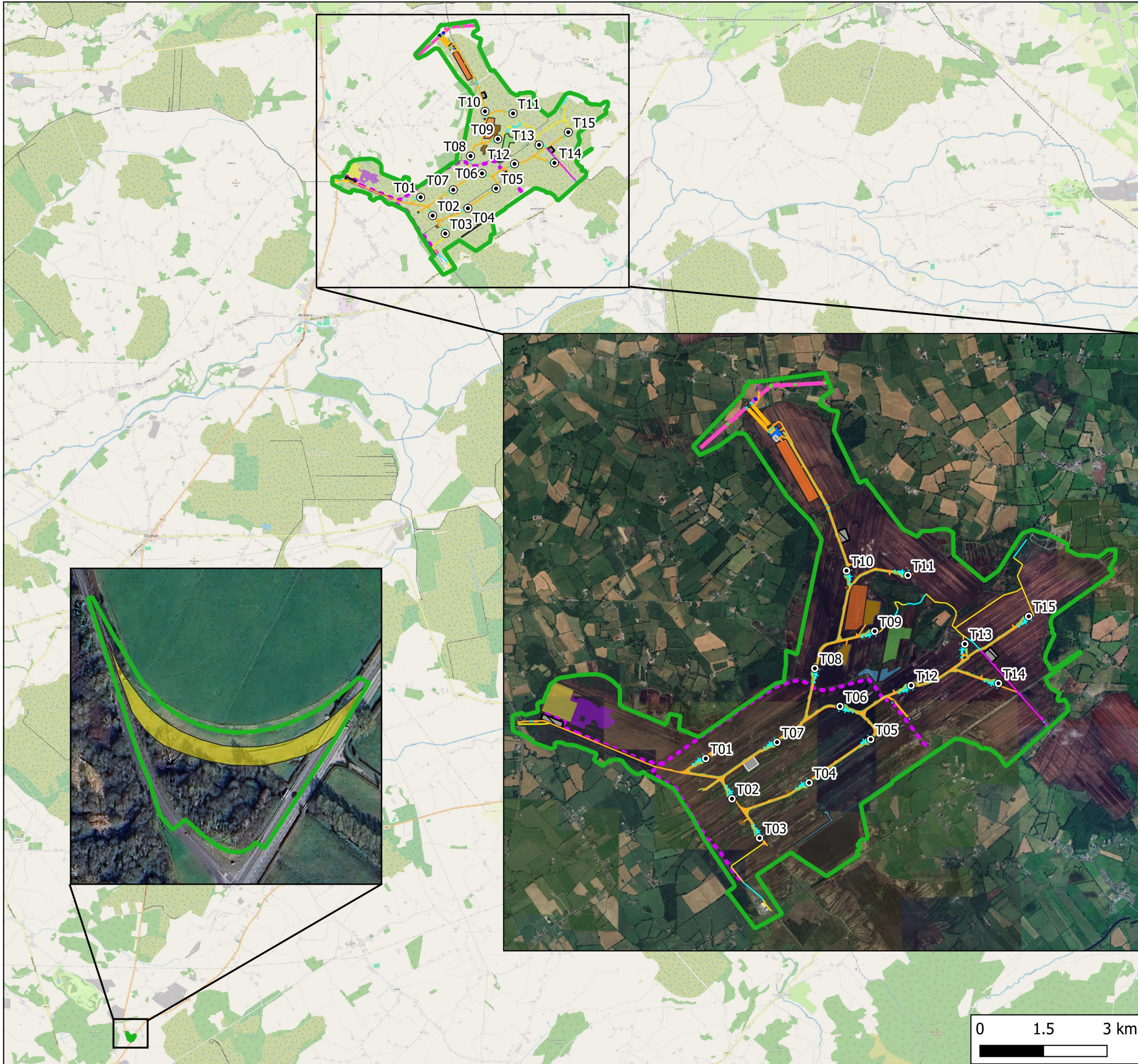
### 2.2 Description of the Proposed Project

This section describes the Proposed Wind Farm and the Proposed Grid Connection, collectively referred to as the Proposed Project. The Proposed Wind Farm consists of 15 no. wind turbines and associated infrastructure including hardstands, 1 no. meteorological mast, 5 no. temporary construction compounds, 4 no. borrow pits, 3 no. permanent amenity carparks, approximately 20.8km of new road (including new amenity track), the upgrade of approximately 3km of existing road (including that for the purposes of amenity), felling of immature woodland (1.02ha), proposed biodiversity mitigation and enhancement measures, and all associated development and drainage works. The Proposed Grid Connection includes for a new proposed onsite 220kV electricity substation, control buildings, 4 no. new steel masts, 2 no. gantry structures, a temporary access track, and all ancillary infrastructure.

A full description of the Proposed Wind Farm and the Proposed Grid Connection can be found in Chapter 4: Description of the Proposed Project of the EIAR.

This application seeks a ten-year planning permission and 35-year operational life from the date of commissioning of the Proposed Wind Farm.

The Proposed Wind Farm is illustrated on Figure 2-1, the Proposed Grid Connection is illustrated on Figure 2-2 and the Proposed Project is illustrated on Figure 2-3 below.



### Map Legend

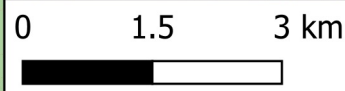
- ▭ EIAR Site Boundary
- Proposed Turbine Layout
- ▭ Proposed Turbine Foundations
- ▭ Proposed Hardstands
- ▭ Proposed New Roads
- ▭ Proposed Temporary Access Track
- ▭ Proposed Upgrades to Existing Roads
- ▭ Proposed New Amenity Track
- ▭ Proposed Upgrades to Existing Roads for Amenity Track
- ▭ Proposed Lay By for Delivery Vehicles
- ▭ Proposed Gates
- ▭ Proposed Security Hut
- ▭ Proposed Onsite 220kV Substation
- ▭ Proposed Telecommunications Tower
- ▭ Proposed Met Mast
- ▭ Proposed Temporary Construction Compounds
- ▭ Proposed Amenity Carparks
- ▭ Proposed Peat Deposition Areas
- ▭ Pump Stations
- ▭ Proposed Pump Station Access Road
- ▭ Proposed Borrow Pits
- ▭ Proposed New Pylons
- ▭ Existing Pylon To Be Removed
- ▭ Existing Pylon
- ▭ Shannonbridge-Maynooth 220kV Overhead Line
- ▭ Proposed Overhead Line
- ▭ Proposed Tower Pads
- ▭ Proposed Crane Pads
- ▭ Proposed Gantry Structures
- Ecological Enhancement**
- ▭ Marsh Fritillary Habitat Creation
- ▭ Woodland Establishment
- ▭ Linear Habitat Replanting
- Ornithological Enhancement and Mitigation**
- ▭ Whooper Swan Wetland
- ▭ Lapwing Semi-Grassland Mosaic
- ▭ Proposed TDR SPA Works

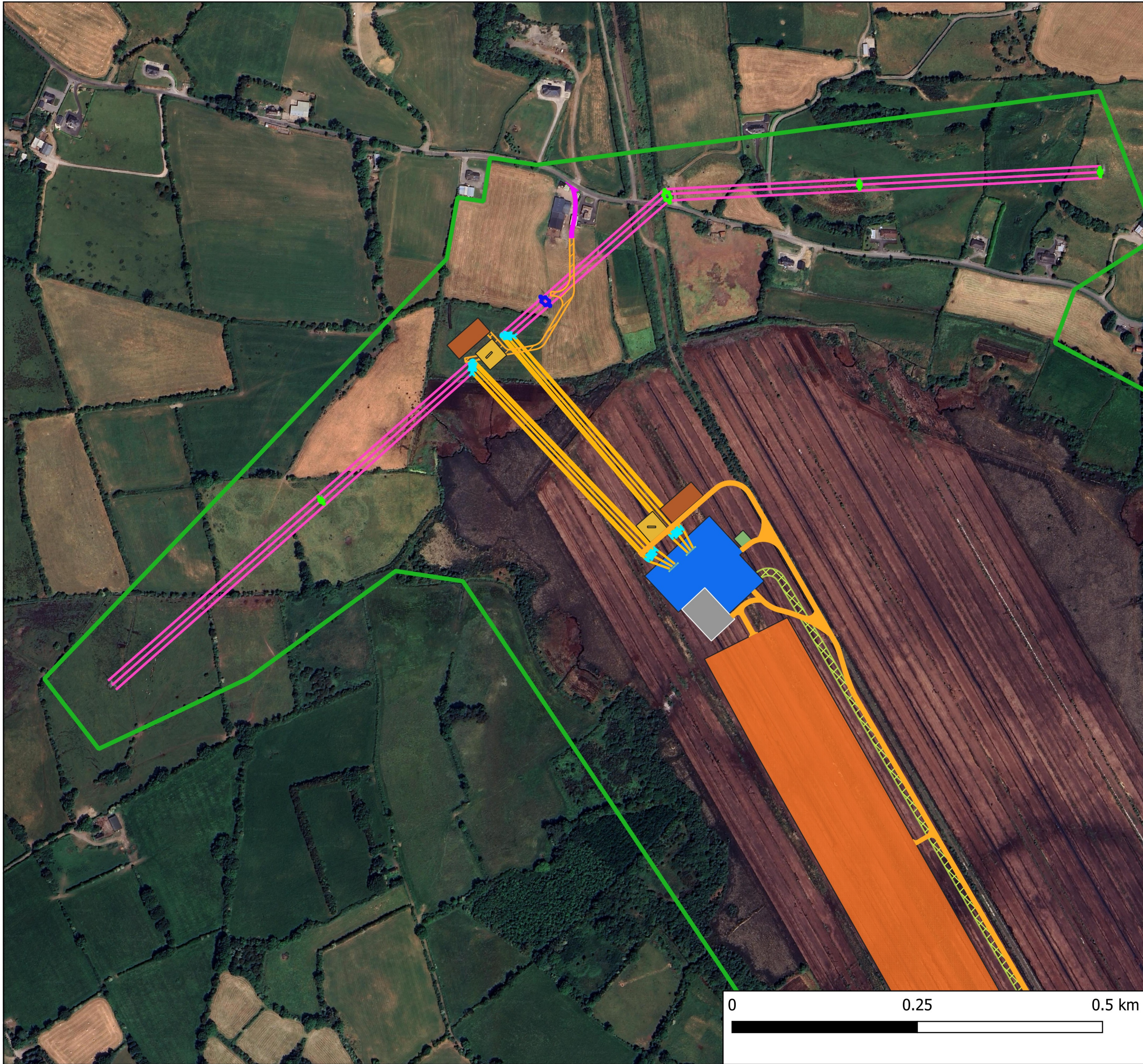
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Drawing Title	
<b>Proposed Wind Farm Layout</b>	
Project Title	
<b>Lemanaghan Wind Farm, Co. Offaly</b>	
Drawn By	Checked By
CJ	EC
Project No.	Drawing No.
200804	Figure 2-1
Scale	Date
1:87,500	2026-03-13

**MKO**  
 Planning and Environmental  
 Consultants  
 Tuam Road, Galway  
 Ireland, H91 VW84  
 +353 (0) 91 735611  
 email: info@mkoireland.ie  
 Website: www.mkoireland.ie





**Map Legend**

- EIAR Site Boundary
- Proposed OHL
- Existing OHL
- Existing Pylon To Be Removed
- Existing Pylons
- Proposed Onsite 220kV Substation
- Proposed Gantry Structures
- Proposed Telecommunications Tower
- Proposed Temporary Construction Compounds
- Proposed Crane Pads
- Proposed Tower Pads
- Proposed New Roads
- Proposed Peat Deposition Area
- Proposed Temporary Works Areas

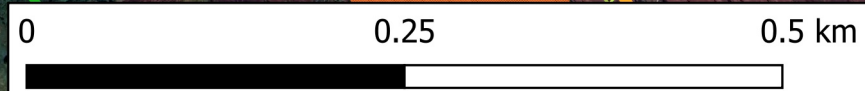


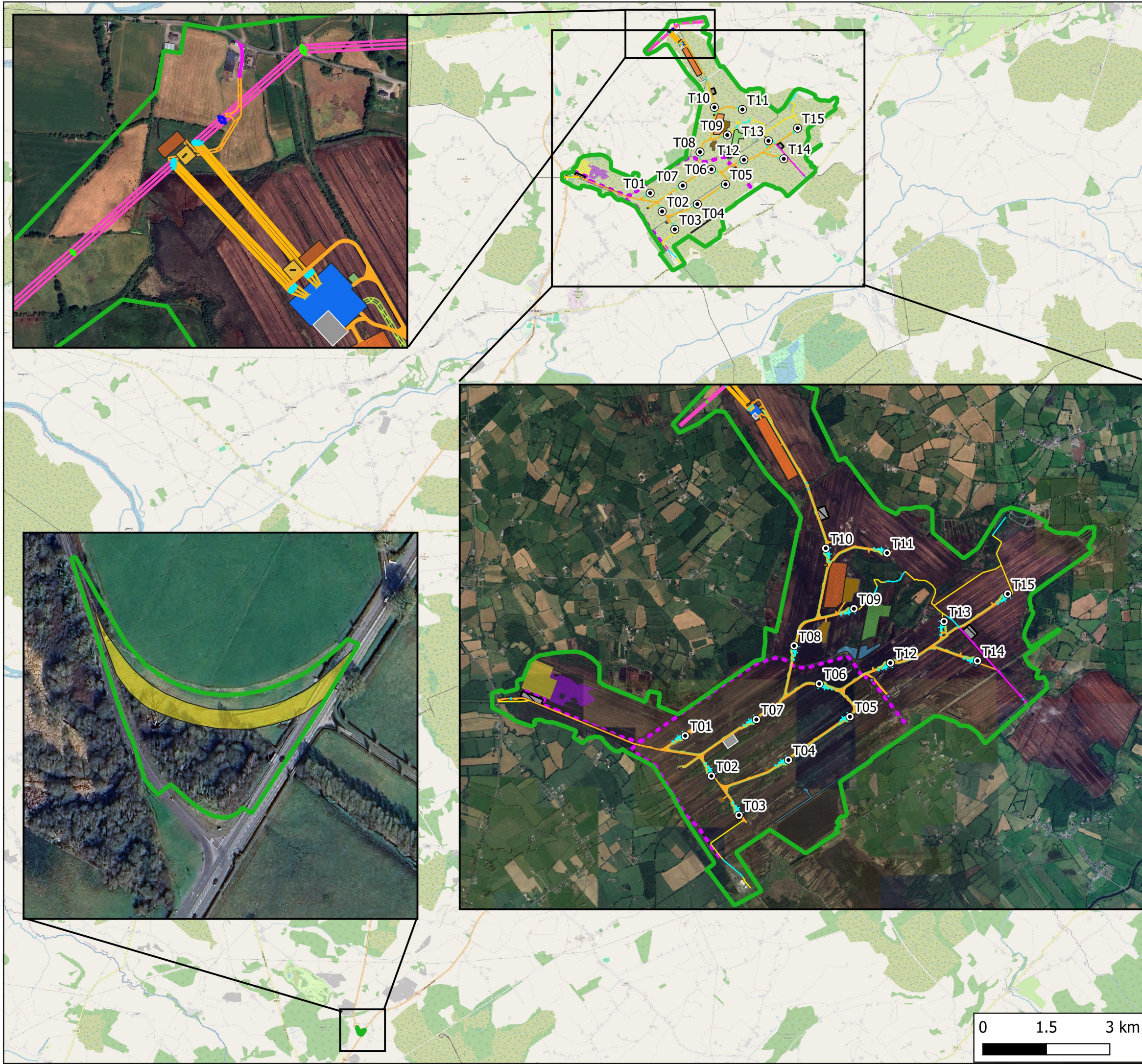
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Drawing Title	
<b>Proposed Grid Connection</b>	
Project Title	
<b>Lemanaghan Wind Farm, Co. Offaly</b>	
Drawn By	Checked By
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Project No.	Drawing No.
200804	2-2
Scale	Date
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**MKO**  
 Planning and Environmental  
 Consultants  
 Tuam Road, Galway  
 Ireland, H91 VW84  
 +353 (0) 91 735611  
 email: info@mkoireland.ie  
 Website: www.mkoireland.ie





Map Legend

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- █ Whooper Swan Wetland
- █ Lapwing Semi-Grassland Mosaic



Drawing Title  
**Proposed Project Layout**

Project Title  
**Lemanaghan Wind Farm, Co. Offaly**

Drawn By CJ	Checked By EC
Project No. 200804	Drawing No. Figure 2-3
Scale 1:87,500	Date 2026-03-13

**MKO**  
Planning and Environmental  
Consultants

Tuam Road, Galway  
Ireland, H91 VW84  
+353 (0) 91 735611  
email: info@mkofireland.ie  
Website: www.mkofireland.ie

## 2.3 Targets and Objectives

The decommissioning phase works will be completed to the approved standards at the time of decommissioning, which include specified materials, standards, specifications and codes of practice. This Decommissioning Plan has considered all potential environmental issues associated with the decommissioning phase.

The key site targets are as follows:

- Ensure decommissioning works and activities are completed in accordance with mitigation and best practice approach presented in the accompanying EIAR and NIS, and associated planning documentation
- Ensure decommissioning works and activities are in line with best practice decommissioning guidelines at the time of decommissioning
- Ensure decommissioning works and activities have an imperceptible impact/disturbance to local landowners and the local community;
- Ensure decommissioning works and activities have an imperceptible impact on the natural environment;
- Ensure decommissioning works and activities will not impact on enhanced peatland rehabilitation under the relevant IPC License (P0500-01) for Lemanaghan Bog peatlands;
- Adopt a sustainable approach to decommissioning; and,
- Provide adequate environmental training and awareness (to the approved standards at the time of decommissioning) for all project personnel.

The key site objectives are as follows:

- Using recycled materials if possible, e.g. soil and overburden material for backfilling and reinstatement. Ensure sustainable sources for materials supply where possible;
- Avoidance of any pollution incident or near miss as a result of working around or close to existing watercourses and have emergency measures in place;
- Avoidance of vandalism;
- Keeping all watercourses free from obstruction and debris;
- Correct implementation of the sustainable drainage system (SuDS) drainage design principles;
- Keep impact of decommissioning works to a minimum on the local environment, watercourses, and wildlife;
- Correct fuel storage and refuelling procedures to be followed;
- Good waste management and housekeeping to be implemented;
- Air and noise pollution prevention to be implemented; and
- Monitoring of the works and any adverse effects that it may have on the environment.

## 2.4 Decommissioning Methodologies Overview

### 2.4.1 Introduction

An experienced principal contractor will be appointed to undertake the decommissioning of the Proposed Wind Farm. The principal contractor will comply with the Decommissioning Plan prepared for the decommissioning phase and any revisions made to this document throughout the phase in which it is adopted. An overview of the decommissioning methodology is provided below.

## 2.4.2 Decommissioning Methodology

### 2.4.2.1 Proposed Wind Farm

At the time of decommissioning, elements of the Proposed Project that will be developed as a temporary facilitator will either be removed, restored to its original condition, or will naturally revegetate. These include the temporary compounds, temporary stilling/settlement ponds and temporary culverts.

Site roadways will be in use for purposes other than the operation of the Proposed Project by the time the decommissioning of the Proposed Wind Farm is to be considered (e.g. Lemanaghan Wind Farm Amenity Plan as detailed in Appendix 4-2), and therefore it may be more appropriate to leave the site roads in situ for future use. It is envisaged that the roads will be widely utilised for amenity purposes by the local community and tourists and as part of the granted Offaly West Midlands Trail Network (MTN) (PL Ref: 25/60014).

It is intended that decommissioning process will remove all the remaining elements i.e., above ground components and underground cabling from the Proposed Wind Farm, and reinstate areas where infrastructure is removed. The following elements will be decommissioned:

- Wind turbines and met mast: dismantling and removal off site;
- Turbine and met mast foundation: turbine and met mast foundation backfilling following dismantling and removal of wind turbines, foundations that protrude above ground level will be backfilled with soil (underground reinforced concrete remaining in-situ);
- Internal underground cabling: removal (ducting remaining).

#### 2.4.2.1.1 Wind Turbines and Met Mast

Prior to any works being undertaken on wind turbines or the met mast, they will be disconnected from the grid by the site operator in conjunction with ESB Networks/EirGrid. The dismantling and removal of wind turbines and met mast of this scale is a specialist operation which will be undertaken by the turbine supplier or competent subcontractor. Turbine dismantling will be undertaken in reverse order to methodology employed during their construction. Cranes will be brought back to the Proposed Wind Farm utilising the hardstand areas adjacent to each turbine. The dismantling of turbines and met mast will be bound by the same safety considerations as will be the case during construction in terms of weather conditions. Works will not be undertaken during adverse weather conditions and in particular not during high winds.

The turbines and met mast will be removed from the Proposed Wind Farm in a similar manner to how they will be transported to the site originally in extended articulated trucks. The details of transport to and from the Proposed Wind Farm are assessed in Section 15.1 of Chapter 15 of the EIAR.

The transport of disassembled turbines from the Proposed Wind Farm will be undertaken in accordance with a Transport Management Plan (TMP). The TMP will be issued to and agreed with the planning authority at that time as part of a permit application for the delivery of abnormal loads using the local roads under the *Road Traffic (Special Permits for Particular Vehicles) Regulations 2007*. The TMP will provide for all necessary safety measures, including a convoy and Garda escort as required, off-peak turning/reversing movements and any necessary safety controls. A Traffic Management Plan is included as Appendix 15-2 of this EIAR.

#### 2.4.2.1.2 Turbine and Met Mast Foundations

On the dismantling of turbines and met mast, it is not intended to remove the concrete foundation from the ground. It is considered that its removal will be the least preferred option in terms of potential effects on the environment in line with best practice guidance. Therefore, the foundations of the 15 no.

turbines and 1 no. met mast will be reinstated with previously excavated peat, and either be reseeded or left to revegetate naturally. Peat will be spread and graded over the foundation using a tracked excavator and revegetation enhanced by spreading of an appropriate seed mix to assist in revegetation and accelerate the resumption of the natural drainage management that will have existed prior to any construction.

#### 2.4.2.1.3 **Internal Underground Cabling**

The underground electrical cabling connecting the proposed turbines and met mast to the proposed onsite 220kV substation will be removed from the cable ducts and any direct buried cables will be cut and left in situ. The cabling will be pulled from the cable ducts using a mechanical winch which will extract the cable and re-roll it on to a cable drum. This will be undertaken at the original cable jointing pits which will be excavated using a mechanical excavator and will be fully re-instated once the cables are removed. The ground above original pulling pits will be excavated using a mechanical excavator and will be fully re-instated once the cables are removed.

The cable ducting will be left in situ as it is considered the most environmentally prudent option, avoiding unnecessary excavation and soil disturbance. The cable materials will be transferred to a suitable recycling or recovery facility.

#### 2.4.2.2 **Proposed Grid Connection**

The Proposed Grid Connection will remain in place as it will be under the ownership and control of the ESB Networks and/or EirGrid and will form a permanent part of the national electricity grid.

### 3. ENVIRONMENTAL MANAGEMENT

The following sections give an overview of the drainage, dust and noise control measures, a waste management plan for the site and the implementation of the environmental management procedures for the site.

It is a requirement of ‘*Condition 10 Cutaway Bog Rehabilitation*’ of the IPC Licence for Lemanaghan Bog (P0500-01) that following the decommissioning of all or part of their bogs, as per IPC licence requirements BnM, prepares (to the satisfaction of the EPA) and implements a Cutaway Bog Decommissioning and Rehabilitation Plan.

BnM has produced a draft Cutaway Bog Decommissioning and Rehabilitation Plan (Draft Rehabilitation Plan) for Lemanaghan Bog, and it is the intention of BnM to rehabilitate the bog in a phased approach under the IPC Licence. The main criteria pertaining to successfully complying with this condition is ensuring that no environmental liability remains from historical industrial peat extraction infrastructure and material and that the bog can be deemed suitable for surrender of the license under Section 95 of the Environmental Protection Agency Act, 1992.

The Draft Rehabilitation Plan for Lemanaghan Bog is included as Appendix 2-4 to the EIAR. The decommissioning of the Proposed Wind Farm will be completed in compliance with the requirements of the Final Cutaway Bog Decommissioning and Rehabilitation Plan for Lemanaghan Bog as appropriate.

#### 3.1 Site Drainage

The site drainage features for the Proposed Wind Farm during its construction and operation are outlined in the EIAR which accompany this application. As this Decommissioning Plan is a working document and presented as an Appendix to the EIAR, the drainage measures are not included in this document. When the final Decommissioning Plan is prepared prior to decommissioning and presented as a standalone document, all drainage management measures, which will include maintenance of the operational drainage regimes, will be included in that document. The drainage proposals will be developed further prior to the commencement of decommissioning if deemed necessary. However, it should be noted that all decommissioning measures will take cognisance of the IPC Condition 10 rehabilitation in and around the Proposed Wind Farm infrastructure as implemented under the IPC License as part of the Final Cutaway Bog Decommissioning and Rehabilitation Plans which will be agreed by the EPA. By the time decommissioning is undertaken after the planned 35-year lifespan of the Proposed Wind Farm, areas within the site will have revegetated. It is not anticipated that the decommissioning phase will interrupt this restored drainage regime in any way with the works proposed. As a minimum measure, areas where peat is placed as part of turbine foundation reinstatement will be surrounded by silt fencing if deemed necessary until the area has naturally revegetated.

#### 3.2 Refuelling, Fuel and Hazardous Material Storage

Wherever possible, vehicles will be refuelled off-site. This will be the case for regular, road-going vehicles. Heavy plant and machinery will be refuelled on-site by a fuel truck that will come to the Site as required on a scheduled and organised basis. All refuelling will be carried out outside designated watercourse buffer zones.

The following mitigation measures are proposed to avoid release of hydrocarbons at the site:

- All plant will be inspected and certified to ensure they are leak free and in good working order prior to use on site;
- On-site re-fuelling of machinery will be carried out using a mobile double skinned fuel bowser. The fuel bowser, a double-axel custom-built refuelling trailer or truck will be re-filled off site and will be towed/driven around the site to where machinery are located. The 4x4 jeep/fuel truck will also carry fuel absorbent material and pads in the event of any accidental spillages. The fuel bowser will be parked on a level area in the compound when not in use and only designated trained and competent operatives will be authorised to refuel plant on site. Mobile measures such as drip trays and fuel absorbent mats will be used during all refuelling operations;
- Fuels stored on site will be minimised. Any storage areas will be bunded appropriately for the fuel storage volume during the decommissioning phase;
- The plant used will be regularly inspected for leaks and fitness for purpose;
- An emergency plan for the decommissioning phase to deal with accidental spillages will be developed (refer to Section 5 below). Spill kits will be available to deal with accidental spillages.

### 3.3 Dust Control

Dust can be generated from on-site activities during decommissioning such as reinstatement of foundations and travelling on site roads during prolonged periods of dry weather. The extent of dust generation will depend on the type of activity undertaken, the location, the nature of the dust, i.e. soil, and the weather. In addition, dust dispersion is influenced by external factors such as wind speed and direction and/or, periods of dry weather. Site traffic movements also have the potential to generate dust as they travel along the haul route. If necessary, haul roads and other areas of hardstanding will be damped down by water spray or water misting to prevent the generation of dust.

Proposed measures to control dust, which are the same as those proposed for the construction phase, include:

- A wheel wash facility will be installed on the Proposed Wind Farm at all proposed decommissioning site entrance and will be used by vehicles before leaving the site.
- Sporadic wetting of loose stone surface will be carried out during the decommissioning phase to minimise movement of dust particles to the air. In periods of extended dry weather, dust suppression may be necessary along haul roads, site roads, grid route, road widening sections, substation, and compounds and around the borrow pit area to ensure dust does not cause a nuisance.
  - If necessary, such as during periods of dry weather, de-silted water will be taken from stilling ponds in the site's drainage system and will be pumped into a bowser or water spreader to dampen down haul roads, turbine bases, borrow pit and site compounds to prevent the generation of dust where required.
  - Water bowser movements will be carefully monitored to avoid, insofar as reasonably possible, increased runoff.
- 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 deposition areas.
- Turbines components and decommissioning phase materials will be transported from the site on specified haul routes only, as agreed with the local authority.
  - The agreed haul route roads adjacent to the site will be regularly inspected for cleanliness and cleaned as deemed necessary by the decommissioning Site Supervisor/Site Manager.
- The transport of decommissioning materials may have the potential to generate dust in dry weather conditions. Roads will be watered down to suppress dust particles in the air as deemed necessary by the Site Supervisor/Manager.

- 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.
  - The MRF facility will be local to the site to reduce dust emissions associated with vehicle movements. The nearest licensed waste facility is located approximately 19.4km southeast of the Proposed Project site

## 3.4 Noise Control

The operation of plant and machinery, including site vehicles, is a source of potential impact that will require mitigation at all locations within the site. To avoid unsociable hours where possible, decommissioning works will be restricted to normal daytime working hours (i.e., weekdays 0700 – 1900hrs and Saturdays 0700 – 1400hrs), which are the same as those proposed during the construction phase. However, to ensure that optimal use is made of good weather periods or at critical periods within the programme (e.g., concrete pours) or to accommodate transportation of turbine components for removal along public routes it could be necessary on occasion to work outside of these hours. Any such out of hours working will be agreed in advance with the Local Authority.

Proposed measures to control noise include:

The contract documents will specify that the Contractor undertaking the works will be obliged to adopt best practice noise abatement measures contained in British Standard BS 7385 – *Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration (1993)*; and BS 5228 – *Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration (2009+A1:2014)*.

The following best practice mitigation measures from these documents will be implemented as required for the duration of the decommissioning phase:

- Limiting the hours during which site activities likely to create high levels of noise or vibration are permitted;
- Establishing channels of communication between the contractor/developer, Local Authority and residents;
- Monitoring typical levels of noise and vibration during critical periods and at sensitive locations;
- Selection of plant with low inherent potential for generation of noise and/ or vibration where practical;
- Placing of noise generating / vibratory plant as far away from sensitive properties as practical within the site constraints, and;
- The hours of decommissioning activity will be limited to avoid unsociable hours where possible. Works operations shall generally be restricted to between 7:00hrs and 19:00hrs Monday to Friday and Saturday between 7:00hrs and 13:00hrs. However, to ensure that optimal use is made of good weather periods or at critical periods within the programme (e.g., concrete pours) or to accommodate transportation of turbine components for removal along public routes it could be necessary on occasion to work outside of these hours. Any such out of hours working will be agreed in advance with the Local Authority.

And more specifically:

- The best means practicable, including proper maintenance of plant, will be employed to minimise the noise produced by on site operations.
- Compressors will be attenuated models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic tools shall be fitted with suitable silencers.

- Machinery that is used intermittently will be shut down or throttled back to a minimum during periods when not in use.
- Any plant, such as generators or pumps, which is required to operate outside of general decommissioning hours will be surrounded by an acoustic enclosure or portable screen as appropriate.

## 3.5 Biodiversity

Regarding Biodiversity at the site, the decommissioning phase will involve the following best practice mitigation measures:

- All measures to mitigate the risks of contamination of watercourses as highlighted in Chapters 8 (Land, Soils and Geology) and Chapter 9 (Water) of the EIAR will be fully implemented.
- The areas within 50m of the hard-stand and turbine foundations will be subject to a pre-works terrestrial ecology walkover to highlight any constraints that may be present (e.g. breeding or resting places of protected species, presence of Invasive Plant Species, etc.). If any significant constraints are identified appropriate controls will be developed and integrated into the live decommissioning plan ahead of the commencement of work.
- If any Third Schedule Invasive species are present in or adjacent to the works footprint, an Invasive Species Management Plan (ISMP) will be developed, and all recommendations implemented in accordance with the contemporary best practice measures.
- Speed limits will be enforced on internal roads.
- A detailed TMP will be incorporated into the decommissioning plan which will ensure that areas of intact blanket bog are unaffected by traffic or storage of plant and materials.
- All wastes will be stored in covered segregated containers and disposed of at licensed facilities.
- No refuelling or other hydrocarbon related usage will be undertaken within 50m of any watercourse in relation to maintenance vehicles, plant or machinery.
- Any import of soil or fill necessary in the decommissioning process shall be from approved sources and appropriately tested or inspected to minimise the risk of import of invasive species. Only soil appropriate to the site (pH, soil type) will be used. The re-seeding or natural revegetation of reinstated areas will proceed on the advice of a suitably qualified ecologist. Any seed mix used will be on the approval of the ecologist.

## 3.6 Invasive Species Management

Any soil material that will be imported to the Proposed Wind Farm as part of the foundation reinstatement will be free of any invasive species (listed under the *Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011* (S.I. No. 477 of 2011)). The Site Manager will take steps to ensure the sourcing of suitably clean soil material and verify the quality of the material by having it inspected prior to bringing it to site by a suitably qualified ecologist. 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.

## 3.7 Ornithology

Taking a precautionary approach, it is proposed that decommissioning works will commence outside the bird nesting season (1st of March to 31st of August inclusive). Decommissioning monitoring surveys will be undertaken prior to works associated with decommissioning at the Proposed Wind Farm. The surveys will include a thorough walkover survey to a 500m radius of the development footprint and all works areas, where access allows. Any requirement for decommissioning works to run into the

subsequent breeding season following commencement will be subject to a repeat of the decommissioning bird surveys to confirm the absence of breeding birds of conservation concern. 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 decommissioning phase. If it is found to be active during the decommissioning phase survey, no works shall be undertaken within a species-specific buffer (as per Goodship, N.M. and Furness, R.W. 2022), in line with industry best practise. No works shall be permitted within the buffer until it can be demonstrated that the roost/nest is no longer occupied.

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 decommissioning staff. The restricted area will also be marked to alert all personnel on site to the suspension of works within that area.

Regarding Ornithology and Avian Populations, the Decommissioning Plan will include industry best practice measures to mitigate the impact of works on birds, which may include the following:

- No removal of woody vegetation or scrub will be carried out within the bird breeding season (March 1<sup>st</sup> to August 31<sup>st</sup>)
- Vantage Point surveys will be carried out for the season before and during the decommissioning process.
- The areas within 50m of the hard-stand and turbine foundations will be subject to a pre-works ornithology walkover to highlight any constraints that may be present (e.g. breeding or resting places of protected species). If any significant constraints are identified, appropriate controls will be developed and integrated into the live decommissioning plan ahead of the commencement of the work.
- Speed limits will be enforced on internal roads.

## 3.8 Traffic Management

A TMP will be prepared in advance of any decommissioning works. The removal of turbines from the site will be undertaken for a specialist haulier. The traffic management arrangements although similar to those that will be implemented for turbine delivery as outlined in the EIAR will be agreed in advance of decommissioning with the competent authority.

## 3.9 Waste Management

This section of the Decommissioning Plan provides a Resource Waste Management Plan (RWMP) which outlines the best practice procedures during the decommissioning of the Proposed Wind Farm. The RWMP outlines the methods of waste prevention and minimisation by recycling, recovery and reuse at each stage of decommissioning. Disposal of waste will be a last resort.

### 3.9.1 Legislation

The Waste Management Act 1996 (the Act) and its subsequent amendments provide for measures to improve performance in relation to waste management, recycling and recovery. The Act also provides a regulatory framework for meeting higher environmental standards set out by other national and EU legislation.

The Act requires that any waste-related activity have all necessary licenses and authorisations. It will be the duty of the Waste Manager on the site to ensure that all contractors hired to remove waste have valid Waste Collection Permits. It will then be necessary to ensure that the waste is delivered to a licensed or permitted waste facility. The waste contractors and subsequent receiving facilities must adhere to the conditions set out in their respective permits and authorisations. Waste removal-related

traffic volumes during the decommissioning phase, will be less than those anticipated and assessed for the construction phase.

The RWMP has been produced in line with the following guidance ‘*Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects*’ (EPA, 2021)<sup>1</sup>.

### 3.9.2 Waste Management Hierarchy

The waste management hierarchy sets out the most efficient way of managing waste in the following order:

#### Prevention and Minimisation:

The primary aim of the RWMP will be to prevent and thereby reduce the amount of waste generated at each stage of the project.

#### Reuse of Waste:

Reusing as much of the waste generated on site as possible will reduce the quantities of waste that will have to be transported off site to recovery facilities or landfill.

#### Recycling of Waste:

There are a number of established markets available for the beneficial use of construction waste such as using waste concrete as fill for new roads.

At all times during the implementation of the RWMP, disposal of waste to landfill will be considered only as a last resort.

### 3.9.3 Waste Arising from Decommissioning

The relevant components will be removed from the Proposed Wind Farm for re-use, recycling or waste disposal. Any structural elements that are not suitable for recycling will be disposed of in an appropriate manner. All lubrication fluids will be drained down and put aside for appropriate collection, storage, transport and disposal. Any materials which cannot be re-used or recycled will be disposed of by an appropriately licenced contractor.

The waste types arising from the decommissioning of the Proposed Wind Farm are outlined in Table 3-1 below.

Table 3-1 Expected waste types arising during the Decommissioning Phase

Material Type	Example	EWG Code
Cables	Electrical wiring	17 04 11
Metals	Copper, aluminium, lead and iron	17 04 07
Fibreglass	Turbine blade component	10 11 03

<sup>1</sup> EPA, 2021. *Best practice guidelines for the preparation of resource & waste management plans for construction and demolition projects*. Available at: <https://www.epa.ie/publications/circular-economy/resources/CDWasteGuidelines.pdf>

Hydrocarbons	Oils and lubricants drained from the turbines	13 01 01, 13 02 04
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### 3.9.3.1 Reuse

Many decommissioning materials can be reused several times before they must be disposed of:

- Electrical wiring can be reused on similar wind energy projects;
- Elements of the turbine components can be reused but this will be determined by the condition that they are in.

### 3.9.3.2 Recycling

If a certain type of material cannot be reused, then recycling is the most suitable option. The opportunity for recycling during decommissioning will be limited and restricted to components of the wind turbines.

All waste that is produced during the decommissioning phase including dry recyclables will be deposited in the on-site skip initially and sent for subsequent segregation at a remote facility. The anticipated volume of all waste material to be generated at the site is low which provides the justification for adopting this method of waste management.

### 3.9.3.3 Implementation

#### 3.9.3.3.1 Roles and Responsibilities

Prior to the commencement of the decommissioning, a Decommissioning Waste Manager will be appointed by the Contractor. The Decommissioning Waste Manager will oversee the implementation of the objectives of the plan, 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 decommissioning adheres to the RWMP.

#### 3.9.3.3.2 Training

It is important for the Decommissioning Waste Manager to communicate effectively with colleagues in relation to the aims and objectives of the resource waste management plan. All employees working on site during the decommissioning phase of the Proposed Wind Farm will be trained in materials management and thereby, should be able to:

- Distinguish reusable materials from those suitable for recycling;
- Ensure maximum segregation at source;
- Co-operate with site manager on the best locations for stockpiling reusable materials;
- Separate materials for recovery; and
- Identify and liaise with waste contractors and waste facility operators.

#### 3.9.3.3.3 Record Keeping

The RWMP will provide systems that will enable all arisings, movements and treatments of decommissioning waste to be recorded. This system will enable the contractor to measure and record the quantity of waste being generated. It will highlight the areas from which most waste occurs and allows the measurement of arisings against performance targets. The RWMP can then be adapted with changes that are seen through record keeping.

The fully licensed waste contractor employed to remove waste from the site will be required to provide documented records for all waste dispatches leaving the site. Each record will contain the following:

- > Consignment Reference Number;
- > Material Type(s) and EWC Code(s)/LOW Codes(s);
- > Company Name and Address of Site of Origin;
- > Trade Name and Collection Permit Ref. of Waste Carrier;
- > Trade Name and Licence Ref. of Destination Facility;
- > Date and Time of Waste Dispatch;
- > Registration no. of Waste Carrier vehicle;
- > Weight of Material;
- > Signature of Confirmation of Dispatch detail;
- > Date and Time of Waste Arrival at Destination; and
- > Site Address of Destination Facility.

### 3.9.3.4 **Resource Waste Management Plan Conclusion**

The RWMP will be properly adhered to by all staff involved in the Proposed Project which will be outlined within the induction process for all site personnel. The waste hierarchy should always be employed when designing the plan to ensure that the least possible amount of waste is produced during decommissioning. Reuse of certain types of material will cut down on the cost and requirement of raw materials therefore further minimising waste levels.

This RWMP has been prepared to outline the main objectives that are to be adhered to, and it will be updated as required to the best practice at the time of decommissioning.

## 3.10 **Environmental Management Implementation**

### 3.10.1 **Roles and Responsibilities**

The Site Manager and/or Environmental Clerk of Works (EnvCoW) are the project focal point relating to decommissioning-related environmental issues.

In general, the EnvCoW will maintain responsibility for monitoring the decommissioning works and Contractors/Sub-contractors from an environmental perspective. The EnvCoW will act as the regulatory interface on environmental matters. The Site Manager will be responsible for reporting to and liaising with Offaly County Council and other statutory bodies as required.

The Site Manager in consultation with the EnvCoW will be responsible for employing the services of a suitably qualified ecologist and any other suitably qualified professionals as required throughout the decommissioning works.

## 4. HEALTH AND SAFETY

Decommissioning of the Proposed Wind Farm will necessitate the presence of a construction site and travel on the public road network to and from the site. Construction sites and the machinery used on them pose a potential health and safety hazard to construction workers if site rules are not properly implemented.

The Proposed Wind Farm will be decommissioned in accordance with all relevant Health and Safety Legislation, including:

- *Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005);*
- *Safety, Health and Welfare at Work (General Application) (Amendment) Regulations 2016 (S.I. No. 36 of 2016);*
- *S.I. No. 528/2021 - Safety, Health and Welfare at Work (Construction) (Amendment) Regulations 2021;*
- *Part 4 of the Safety, Health and Welfare at Work (General Application) Regulations 2007 (S.I. No. 299 of 2007); and*
- *Safety, Health and Welfare at Work (Work at Height) Regulations 2006 (S.I. No. 318 of 2006).*

The following measures below are also detailed in Chapter 18: Schedule of Monitoring and Mitigation Measures of the EIAR.

- A Health and Safety Plan covering all aspects of the decommissioning process will address the Health and Safety requirements in detail. This will be prepared on a preliminary basis at the procurement stage and developed further at decommissioning stage.
- 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 decommissioning contract and current health and safety legislation to adequately provide for all hazards and risks associated with the decommissioning phase of the Wind Farm. SafePass registration cards are required for all decommissioning, delivery and security staff. Decommissioning 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 decommissioning 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.
- Goal posts will be established, where necessary, under overhead electricity lines for the entirety of the decommissioning phase of the Proposed Wind Farm.
- The suitability of machinery and equipment for use near power lines will be risk assessed.
- All staff will be trained on operating voltages of overhead electricity lines running the site. All staff will be trained to be aware of the risks associated with overhead lines. All contractors that may visit the site are made aware of the location of lines before they come to site.
- Barriers will run parallel to the overhead line at a minimum horizontal distance of 6 metres on plan from the nearest overhead line conductor wire.
- When activities must be carried out beneath overhead lines, e.g., turbine component removal, a site-specific risk assessment will be undertaken prior to any works. The risk assessment must take into account the maximum potential height that can be reached by the plant or equipment that will be used prior to any works. Overhead line proximity detection equipment will be fitted to machinery when such works are required.
- Information on safe clearances will be provided to all staff and visitors.

- Signage indicating locations and health and safety measures regarding overhead lines will be erected in canteens and onsite.
- All staff will be made aware of and adhere to the Health & Safety Authority's '*Guidelines on the Procurement, Design and Management Requirements of the Safety, Health and Welfare at Work (Construction) (Amendment) Regulations 2021*'. This will encompass the use of all necessary Personal Protective Equipment and adherence to the Site Health and Safety Plan.

The scale and scope of the project necessitates that a Project Supervisor Design Process (PSDP) and Project Supervisor Decommissioning Stage (PSDecS) are required to be appointed in accordance with the provisions of the Health & Safety Authority's '*Guidelines on the Procurement, Design and Management Requirements of the Safety, Health and Welfare at Work (Construction) Regulations 2013*'.

The PSDP appointed for the decommissioning 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):

- Identify hazards arising from the design or from the technical, organisational, planning or time related aspects of the project;
- Where possible, eliminate the hazards or reduce the risks;
- Communicate necessary control measures, design assumptions or remaining risks to the PSDecS so they can be dealt with in the Safety and Health Plan;
- Ensure that the work of designers is coordinated to ensure safety;
- Organise co-operation between designers;
- Prepare a written Safety and Health Plan;
- Prepare a safety file for the completed structure and provide this to the Client; and
- Notify the Authority and the client of non-compliance with any written directions issued.

The PSDecS appointed for the decommissioning phase 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):

- Development of the Safety and Health Plan for the decommissioning phase with updating where required as work progresses;
- Compile and develop safety file information;
- Reporting of accidents / incidents;
- Weekly site meeting with PSDP;
- Coordinate arrangements for checking the implementation of safe working procedures;
- Ensure that the following are being carried out:
  - Induction of all site staff including any new staff enlisted for the project from time to time;
  - Toolbox talks as necessary;
  - Maintenance of a file which lists personnel on site, their name, nationality, current SafePass number, current Construction Skills Certification Scheme (CSCS) card (where relevant) and induction date;
  - Report on site activities to include but not limited to information on accidents and incidents, disciplinary action taken and PPE compliance;
  - Monitor the compliance of contractors and others and take corrective action where necessary; and
  - Notify the Authority and the client of non-compliance with any written directions issued.

## 5. EMERGENCY RESPONSE PLAN

An Emergency Response Plan (ERP) is presented in this section of the Decommissioning Plan. It provides details of procedures to be adopted in the event of an emergency in terms of site health and safety and environmental protection.

### 5.1 Emergency Response Procedure

The ERP includes details on the response required and the responsibilities of all personnel in the event of an emergency. The ERP will require updating and submissions from the contractor/ PSDecS and sub-contractors as decommissioning progresses. Where sub-contractors that are contracted on site are governed by their own emergency response procedure a bridging arrangement will be adopted to allow for inclusion of the sub-contractor’s ERP within this document.

The ERP is a working document that requires updating throughout the various stages of the Proposed Wind Farm.

#### 5.1.1 Roles and Responsibilities

The chain of command during an emergency response sets out the staff members responsible for coordinating the response. The Site Supervisor/Decommissioning Manager will lead the emergency response which makes him/her responsible for activating and coordinating the emergency response procedure. The other site personnel who can be identified at this time who will be delegated responsibilities during the emergency response are presented in Figure 5-1. In a situation where the Site Supervisor/Decommissioning Manager is unavailable or incapable of coordinating the emergency response, the responsibility will be transferred to the next person in the chain of command outlined in Figure 5-1. This will be updated throughout the various stages of the decommissioning process.

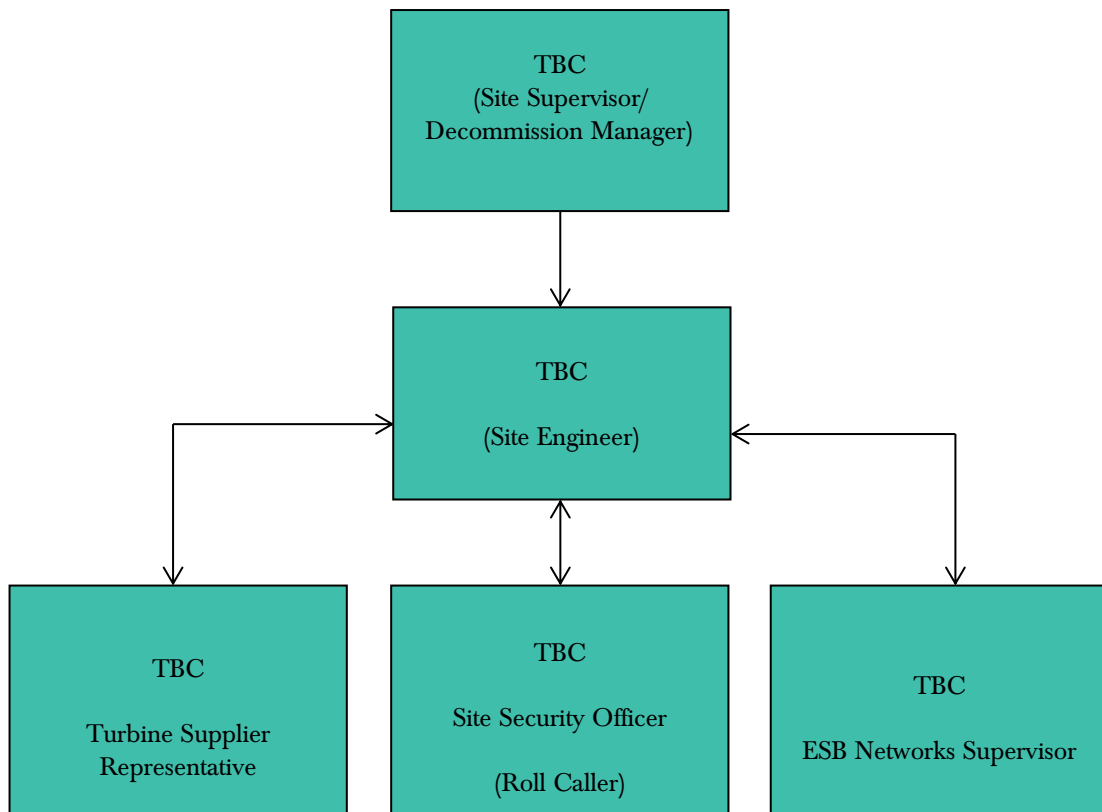


Figure 5-1 Emergency Response Procedure Chain of Command

## 5.1.2 Initial Steps

To establish the type and scale of potential emergencies that may occur, the following hazards have been identified as being potential situations that may require an emergency response in the event of an occurrence.

Table 5-1 Hazards associated with potential emergency situations

Hazard	Emergency Situation
Decommissioning Vehicles: Dump trucks, tractors, excavators, cranes etc.	Collision or overturn which has resulted in operator, third-party injury or fuel spill.
Peat Instability	Excessive movement of peat on site; onset of peat slide
Abrasive wheels/Portable Tools	Entanglement, amputation or electrical shock associated with portable tools
Contact with services	Electrical shock or gas leak associated with an accidental breach of underground services
Fire	Injury to operative through exposure to fire
Falls from heights including falls from scaffold towers, scissor lifts, ladders, roofs and turbines.	Injury to operative after a fall from a height
Sickness	Illness unrelated to site activities of an operative e.g. heart attack, loss of consciousness, seizure
Turbine Specific Incident	This will be included the turbine manufacturers' emergency response plan.

In the event of an emergency situation associated with, but not restricted to, the hazards outlined in Figure 5-1 the Site Supervisor/Decommissioning Manager will carry out the following:

- Establish the scale of the emergency situation and identify the number of personnel, if any, have been injured or are at risk of injury.
- Where necessary, sound the emergency siren/foghorn that activates an emergency evacuation. The Site Supervisor/Decommissioning Manager must proceed to the assembly point if the emergency poses any significant threat to their welfare and if there are no injured personnel at the scene that require assistance. The Site Supervisor/Decommissioning Manager will be required to use their own discretion at that point. In the case of fire, the emergency evacuation should proceed, without exception. The evacuation procedure is outlined in Section 5.1.3.
- Make safe the area if possible and ensure that there is no identifiable risk exists with regard to dealing with the situation e.g. if a machine has turned over, ensure that it is in a safe position so as not to endanger others before assisting the injured.
- Contact the required emergency services or delegate the task to someone. If delegating the task, ensure that the procedures for contacting the emergency services as set out in Section 5.2 is followed.
- Take any further steps that are deemed necessary to make safe or contain the emergency incident e.g. cordon off an area where an incident associated with electrical issues has occurred.

- Contact any regulatory body or service provider as required, e.g. ESB Networks, the telephone numbers for which as provided in Section 5.2.
- Contact the next of kin of any injured personnel where appropriate.

### 5.1.3 Site Evacuation/Fire Drill

A site evacuation/fire drill procedure will provide basis for carrying out the immediate evacuation of all site personnel in the event of an emergency. The following steps will be taken:

- Notification of the emergency situation. Provision of a siren or foghorn to notify all personnel of an emergency situation.
- An assembly point will be designated in the compound area and will be marked with a sign. All site personnel will assemble at this point.
- A roll call will be carried out by the Site Security Officer to account for all personnel on site.
- The Site Security Officer will inform the Site Supervisor/Decommissioning Manager when all personnel have been accounted for. The Supervisor/Decommissioning Manager will decide the next course of action, which be determined by the situation that exists at that time and will advise all personnel accordingly.

All personnel will be made aware of the evacuation procedure during site induction. The Fire Services Acts of 1981 and 2003 require the holding of fire safety evacuation drills at specified intervals and the keeping of records of such drills.

### 5.1.4 Excessive Peat Movement

As stated in Appendix 4-3 Peat and Spoil Management Plan (PSMP), in the unlikely event of excessive peat movement or continuing peat movement recorded at a monitoring location, or identified at any location within the site, but no apparent signs of distress to the peat (e.g., cracking, surface rippling) then the following shall be carried out.

1. *All activities (if any) shall cease within the affected area.*
2. *Increased monitoring at the location shall be carried out. The area will be monitored, as appropriate, until such time as movements have ceased.*
3. *Re-commencement of activities shall only start following a cessation of movement and agreement with all parties (Contractor/Engineer/Designer).*

### 5.1.5 Onset of Peat Slide

As stated in appendix 4-3 PSMP, in the very unlikely event of an onset or actual detachment of peat (e.g., cracking, surface rippling) then the following shall be carried out.

1. *On alert of a peat slide incident, all activities (if any) in the area should cease and all available resources will be diverted to assist in the required mitigation procedures.*
2. *Action will be taken to prevent a peat slide reaching any watercourse. This will take the form of the construction of check barrages on land. Due to the terrain and the inability to predict locations it may not be possible to implement any on-land prevention measures, in this case a watercourse check barrage will be implemented.*
3. *All relevant authorities should be notified if a peat slide event occurs on site.*
4. *For localised peat slides that do not represent a risk to a watercourse and have essentially come to rest the area will be stabilised initially by rock infill, if required. The failed area and surrounding area will then be assessed by the engineering staff and stabilisation procedures implemented. The area will be monitored, as appropriate, until such time as movements have ceased.*

## 5.1.6 Spill Control Measures

Every effort will be made to prevent an environmental incident during the decommissioning phase of the Proposed Wind Farm. Oil/fuel spillages are one of the main environmental risks that will exist on the site which will require an emergency response procedure. The importance of a swift and effective response in the event of such an incident occurring cannot be over emphasised. The following steps provide the procedure to be followed in the event of such an incident:

- Stop the spill at source and raise the alarm to alert people working in the vicinity of any potential dangers;
- If applicable, eliminate any sources of ignition in the immediate vicinity of the incident.
- Contain the spill using the spill control materials, track mats or other material as required. Do not spread or flush away the spill;
- If possible, cover or bund off any vulnerable areas where appropriate such as drains, watercourses or sensitive habitats;
- If possible, clean up as much as possible using the spill control materials.
- Contain any used spill control material and dispose of used materials appropriately using a fully licensed waste contractor with the appropriate permits so that further contamination is limited;
- Notify the EnvCoW immediately giving information on the location, type and extent of the spill so that they can take appropriate action;
- The EnvCoW will inspect the site and ensure the necessary measures are in place to contain and clean up the spill and prevent further spillage from occurring; and
- The EnvCoW will notify the appropriate regulatory body such as Offaly County Council, and the Environmental Protection Agency (EPA), if deemed necessary.

The importance of a swift and effective response in the event of such an incident occurring cannot be overemphasised. Environmental incidents are not limited to just fuel spillages. Therefore, any environmental incident must be investigated in accordance with the following steps.

- The EnvCoW must be immediately notified;
- If necessary, the EnvCoW will inform the appropriate regulatory authority. The appropriate regulatory authority will depend on the nature of the incident;
- The details of the incident will be recorded on an Environmental Incident Form which will provide information such as the cause, extent, actions and remedial measures used following the incident. The form will also include any recommendations made to avoid reoccurrence of the incident; and
- A record of all environmental incidents will be kept on file by the EnvCoW and the Main Contractor. These records will be made available to the relevant authorities such as Offaly County Council, or the EPA if required.

The EnvCoW will be responsible for any corrective actions required as a result of the incident e.g. an investigative report, formulation of alternative works methodologies or environmental sampling, and will advise the Main Contractor as appropriate.

## 5.2 Contact the Emergency Services

### 5.2.1 Emergency Communications Procedure

In the event of requiring the assistance of the emergency services the following steps will be taken:

**Stay calm.** It is important to take a deep breath and not get excited. Any situation that requires 999/112 is, by definition, an emergency. The dispatcher or call-taker knows that and will try to move things along quickly, but under control.

**Know the location of the emergency and the number you are calling from.** This may be asked and answered a couple of times but do not get frustrated. Even though many emergency call centres have enhanced capabilities meaning they are able to see your location on the computer screen they are still required to confirm the information. If for some reason you are disconnected, at least emergency crews will know where to go and how to call you back.

**Wait for the call-taker to ask questions, then answer clearly and calmly.** If you are in danger of assault, the dispatcher or call-taker will still need you to answer quietly, mostly "yes" and "no" questions.

**If you reach a recording, listen to what it says.** If the recording says your call cannot be completed, hang up and try again. If the recording says all call takers are busy, WAIT. When the next call-taker or dispatcher is available to take the call, it will transfer you.

**Let the call-taker guide the conversation.** He or she is typing the information into a computer and may seem to be taking forever. There is a good chance, however, that emergency services are already being sent while you are still on the line.

**Follow all directions.** In some cases, the call-taker will give you directions. Listen carefully, follow each step exactly, and ask for clarification if you do not understand.

**Keep your eyes open.** You may be asked to describe victims, suspects, vehicles, or other parts of the scene.

**Do not hang up the call** until directed to do so by the call taker.

In the event of an emergency, it may be necessary to liaise with the emergency services to assist them in locating the site if required. This may involve directing them to a designated meeting point that can be easily identified or accessed. This should form part of the site induction to make new personnel and sub-contractors aware of any such arrangement or requirement if applicable.

## 5.3 Contact Details

A list of emergency contacts is presented in Table 5-2. A copy of these contacts will be included in the Site Safety Manual and in the site offices and the various site welfare facilities.

Table 5-2 Emergency Contacts

Contact	Telephone no.
Emergency Services – Ambulance, Fire, Gardaí	999/112
Doctor – Ferbane Health Centre	090 645 4916
Hospital – Midland Regional Hospital Tullamore	057 932 1501
ESB Emergency Services	1850 372 999
Gas Networks Ireland Emergency	1850 20 50 50
Garda Síochána – Ferbane Garda Station	090 645 4302
Health and Safety Co-ordinator - Health & Safety Services	TBC
Health and Safety Authority	1890 289 389

Inland Fisheries Ireland (IFI)	1890 347 424
Project Supervisor Decommissioning Stage (PSDecS): TBC	TBC
Project Supervisor Design Stage (PSDS): TBC	TBC
Client: Lemanaghan Wind Farm DAC	TBC

## 5.4 Procedure for Personnel Tracking

All operatives on site without any exception will have to undergo a site induction where they will be required to provide personal contact details which will include contact information for the next of kin.

In the event of a site operative becoming in an emergency situation where serious injury has occurred and hospitalisation has taken place, it will be the responsibility of the Site Manager or next in command if unavailable to contact the next of kin to inform them of the situation that exists.

## 5.5 Induction Checklist

Table 5-3 provides a list of items highlighted in this ERP which must be included or obtained during the mandatory site induction of all personnel that will work on the site. This will be updated throughout the various stages of the Proposed Project.

*Table 5-3 Emergency Response Plan Items Applicable to the Site Induction Process*

ERP Items to be included in Site Induction	Status
All personnel will be made aware of the evacuation procedure during site induction	
It may be necessary to liaise with and assist the emergency services on the ground in terms of locating the site. This may involve providing an escort from a designated meeting point that may be located more easily by the emergency services. This should form part of the site induction to make new personnel and sub-contractors aware of any such arrangement or requirement if applicable.	
All operatives on site without any exception will have undergo a site induction where they will be required to provide personal contact details which will include contact information for the next of kin.	

## 6. PROGRAMME OF WORKS

### 6.1 Decommissioning Schedule

The decommissioning phase will take approximately 3 – 9 months to complete from commencing the removal of turbines to the final reinstatement of the Proposed Wind Farm.

At this time, it is not possible to determine when decommissioning will take place. The phasing and scheduling of the main decommissioning task items are outlined in Table 6-1 below.

Table 6-1 Indicative Decommissioning Schedule

ID	Task Name	Task Description	Month 1-3	Month 3-6	Month 6-9
1	Site Health and Safety	Manage Site Health and Safety			
2	Turbine Decommissioning	Disconnect Power Output			
3	Turbine and Met Mast Dismantling	Dissemble Turbine Components			
4	Turbine Removal	Transport of all Turbine Components off Site			
5	Cable Removal	Remove Underground Cables from Ducting			
6	Turbine Foundations Backfill	Reinstate Foundation Areas with previously excavated peat, and either be reseeded or left to revegetate naturally			
7	Accommodation Areas Reinstatement	Reinstate Temporary Abnormal Load Entrances, Turbine Delivery Accommodation works and any necessary Boundary Treatments			

7.

## MITIGATION PROPOSALS

All mitigation measures relating to the pre-commencement, construction and operational phases of the Proposed Project are set out in the various sections of the Environmental Impact Assessment Report (EIAR) and set out in full in Chapter 18 Schedule of Mitigation and Monitoring Measures, and NIS prepared as part of the planning permission application to An Coimisiún Pleanála.

This section of the Decommissioning Plan groups together all of the Decommissioning phase mitigation measures presented in the above documents. The mitigation proposals are presented in table format to provide an easy-to-audit list that can be reviewed and reported on during the decommissioning phase of the Proposed Wind Farm.

Table 7-1 Proposed Mitigation Measures

Ref MM No.	Reference Heading	Reference Location	Mitigation Measure	Audit Result	Action Required
<b>EIAR Chapter 4 – Description of the Proposed Project</b>					
<b>Decommissioning Phase</b>					
MM40	Decommissioning	EIAR Chapter 4 Appendix 4-8	A Decommissioning Plan has been prepared (Appendix 4-8) the detail of which will be agreed with the Local Authority prior to any decommissioning. The Decommissioning Plan will be updated prior to the end of the operational period in line with decommissioning methodologies that may exist at the time and will agree with the Planning Authority at that time. The potential for effects during the decommissioning phase of the Proposed Project has been fully assessed in the EIAR.		
MM41	Decommissioning	EIAR Chapter 4 Appendix 4-8	<ul style="list-style-type: none"> <li>➤ Upon decommissioning of the Proposed Wind Farm, the wind turbines will be disassembled in the reverse order to how they were erected. The turbines will be disassembled with a similar model of crane that was used for their erection. The turbines will be removed from site using the same transport methodology adopted for delivery to site initially. The turbine materials will be transferred to a suitable recycling or recovery facility.</li> <li>➤ The underground electrical cabling connecting the proposed turbines to the proposed onsite 220kV substation will be removed from the cable ducts and any direct buried cables will be cut and left in situ. The cabling will be pulled from the cable ducts using a mechanical winch which will extract the cable and re-roll it on to a cable drum. This will be undertaken at the original cable jointing pits which will be excavated using a mechanical excavator and will be fully re-instated once the cables are removed.</li> </ul>		

			<p>The cable ducting will be left in situ as it is considered the most environmentally prudent option, avoiding unnecessary excavation and soil disturbance. The cable materials will be transferred to a suitable recycling or recovery facility. The Proposed Grid Connection and proposed onsite 220kV substation will remain in place as it will be under the ownership and control of the ESB Networks and/or EirGrid and will form a permanent part of the national electricity grid.</p>		
MM42	Refuelling	EIAR Chapter 4, 8, 9 Appendix 4-8	<ul style="list-style-type: none"> <li>➤ Road-going vehicles will be refuelled off-site wherever possible.</li> <li>➤ On-site refuelling of machinery will be carried out at dedicated refuelling locations using a mobile double-skinned fuel bowser.</li> <li>➤ Heavy plant and machinery will be refuelled on-site by a fuel truck 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.</li> <li>➤ The fuel bowser will be parked on a level area in an appropriately bounded area when not in use and only designated trained and competent operatives will be authorised to refuel plant on site.</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 on-site.</li> <li>➤ Mobile measures such as drip trays and fuel absorbent mats will used during refuelling operations as required.</li> </ul> <p>The following mitigation measures are proposed to avoid release of hydrocarbons at the site:</p> <ul style="list-style-type: none"> <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>➤ Fuels stored on site will be minimised.</li> <li>➤ Onsite refuelling will be carried out by trained personnel only;</li> </ul>		

			<ul style="list-style-type: none"> <li>&gt; All refuelling will be carried out outside of the designated hydrological buffer zones;</li> <li>&gt; Mobile measures such as dip trays and fuel absorbent mats will be used during refuelling operations as required;</li> <li>&gt; All plant and machinery will be equipped with fuel absorbent material and pads to deal with any accidental spillage;</li> <li>&gt; Spill kits will be available to deal with any accidental spillage in and outside the re-fuelling area.</li> <li>&gt; An emergency plan for the decommissioning phase to deal with accidental spillages will be developed (refer to Section 5 of the Decommissioning Plan, Appendix 4-8);</li> <li>&gt; All hazardous wastes will be stored in bunded containers/areas before being collected by an authorised waste contractor and brought to an EPA-licensed waste facility;</li> <li>&gt; Hazardous wastes will be kept separate from non-hazardous wastes so that contamination does not occur.</li> </ul>		
MM58	Decommissioning Phase	EIAR Chapter 4, 5 Appendix 4-8	<p>The wind turbines proposed as part of the Proposed Project are expected to have a lifespan of approximately 35 years. Following the end of their useful life, the wind turbines may be replaced with a new set of turbines, subject to planning permission being obtained, or the site may be decommissioned fully. The substation will remain in place as it will be under the ownership of ESB/EirGrid.</p> <ul style="list-style-type: none"> <li>&gt; The works required during the decommissioning phase are described in Section 4.13 in Chapter 4: Description of the Proposed Project. Any impact and consequential effect that occurs during the decommissioning phase will be similar to that which occurs during the construction phase, however to a lesser extent and lesser duration, and the mitigation measures outlined above will be implemented during the decommissioning phase also. A Decommissioning Plan has been prepared as part of this EIAR and is included as Appendix 4-8. This Decommissioning Plan follows the most up to date NatureScot</li> </ul>		

			<p>guidance. By its nature, the Decommissioning Plan is a working document and, in accordance with the NatureScot guidance, an updated Decommissioning Plan will be agreed with the local authorities three months prior to decommissioning the Proposed Project. The principles that will inform the final decommissioning plan are contained in the CEMP in Appendix 4-4.</p>		
MM67	Decommissioning Phase	EIAR Chapter 6 Appendix 4-8	<p>The same mitigation to prevent significant impacts on water quality and associated aquatic fauna and other terrestrial fauna during construction will be applicable to the decommissioning phase.</p> <p>Regarding Biodiversity at the site, the decommissioning phase will involve the following best practice mitigation measures:</p> <ul style="list-style-type: none"> <li>&gt; All measures to mitigate the risks of contamination of watercourses as highlighted in Chapters 8 and Chapter 9 of the EIAR will be fully implemented.</li> <li>&gt; The areas within 50m of the hard-stand and turbine foundations will be subject to a pre-works terrestrial ecology walkover to highlight any constraints that may be present (e.g. breeding or resting places of protected species, presence of Invasive Plant Species, etc.). If any significant constraints are identified appropriate controls will be developed and integrated into the live decommissioning plan ahead of the commencement of work.</li> <li>&gt; If any Third Schedule Invasive species are present in or adjacent to the works footprint, an Invasive Species Management Plan (ISMP) will be developed, and all recommendations implemented in accordance with the contemporary best practice measures.</li> <li>&gt; Speed limits will be enforced on internal roads.</li> <li>&gt; A detailed Traffic Management Plan (TMP) will be incorporated into the decommissioning plan which will ensure that the Proposed Project site is unaffected by traffic or storage of plant and materials.</li> </ul>		

			<ul style="list-style-type: none"> <li>➤ All wastes will be stored in covered segregated containers and disposed of at licensed facilities.</li> <li>➤ No refuelling or other hydrocarbon-related usage will be undertaken within 50m of any watercourse in relation to maintenance vehicles, plant or machinery.</li> <li>➤ Any import of soil or fill necessary in the decommissioning process shall be from approved sources and appropriately tested or inspected to minimise the risk of import of invasive species. Only soil appropriate to the site (pH, soil type) will be used. The re-seeding or natural revegetation of reinstated areas will proceed on the advice of a suitably qualified ecologist. Any seed mix used will be on the approval of the ecologist.</li> </ul>		
MM74	Decommissioning	<p>EIAR Chapter 7</p> <p>Appendix 4-8</p>	<ul style="list-style-type: none"> <li>➤ Taking a precautionary approach, it is proposed that decommissioning works will commence outside the bird nesting season (1st of March to 31st of August inclusive). Decommissioning monitoring surveys will be undertaken prior to works associated with decommissioning at the Proposed Wind Farm.</li> <li>➤ The surveys will include a thorough walkover survey to a 500m radius of the development footprint and all works areas, where access allows. Any requirement for decommissioning works to run into the subsequent breeding season following commencement will be subject to a repeat of the decommissioning bird surveys to confirm the absence of breeding birds of conservation concern</li> <li>➤ 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 decommissioning phase. If it is found to be active during the decommissioning phase survey, no works shall be undertaken within a species-specific buffer (as per Goodship, N.M. and Furness, R.W. 2022), in line with industry best practice. No works shall be permitted within the buffer until it can be demonstrated that the roost/nest is no longer occupied.</li> </ul>		

			<p>Regarding Ornithology and Avian Populations, the Decommissioning Plan will include industry best practice measures to mitigation the impact of works on birds, which may include the following:</p> <ul style="list-style-type: none"> <li>➤ No removal of woody vegetation or scrub will be carried out within the bird breeding season (March 1<sup>st</sup> to August 31<sup>st</sup>)</li> <li>➤ Vantage Point surveys will be carried out for the season before and during the decommissioning process.</li> <li>➤ The areas within 50m of the hard-stand and turbine foundations will be subject to a pre-works ornithology walkover to highlight any constraints that may be present (e.g. breeding or resting places of protected species). If any significant constraints are identified, appropriate controls will be developed and integrated into the live decommissioning plan ahead of the commencement of the work.</li> <li>➤ Speed limits will be enforced on internal roads</li> </ul>		
MM88	Decommissioning Phase	EIAR Chapter 8 Appendix 4-8	<p>The potential impacts associated with decommissioning of the Proposed Project will be similar to those associated with construction but of reduced magnitude. Mitigation measures applied during decommissioning activities will be similar to those applied during construction where relevant. Mitigation proposed in Line Items MM75 to MM84 in Table 18-1 in Chapter 18 of the EIAR will be implemented as appropriate</p> <p>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 outlined in Line Item MM76 of Table 18-1 in Chapter 18.</p>		
MM109	Decommissioning Phase	EIAR Chapter 9 Appendix 4-8	<p>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 proposed in</p>		

			Line Items MM90 to MM103 in Table 18-1 in Chapter 18 of the EIAR will be implemented as appropriate		
MM114	Decommissioning Phase	EIAR Chapter 10	Any impact and consequential effect that occurs during the decommissioning phase will be similar to that which occur during the construction phase, albeit of lesser impact. The mitigation measures prescribed for the construction phase of the Proposed Wind Farm will be implemented during the decommissioning phase thereby minimising any potential impacts. Mitigation proposed in Line Items MM110 to MM111 in Table 18-1 in Chapter 18 of the EIAR will be implemented as appropriate.		
MM117	Decommissioning Phase	EIAR Chapter 11	Any impact and consequential effect that occurs during the decommissioning phase are similar to that which occur during the construction phase, albeit of lesser impact. The mitigation measures prescribed for the construction phase of the Proposed Project will be implemented during the decommissioning phase thereby minimising any potential impacts. Mitigation proposed in Line Item MM115 in Table 18-1 in Chapter 18 of the EIAR will be implemented as appropriate.		
MM120	Decommissioning Phase (Noise)	EIAR Chapter 4, 12 Appendix 4-8	No specific mitigation measures are required for decommissioning. To ameliorate any potential noise impacts that may present during the decommissioning phase, a schedule of noise control measures has been formulated in accordance with best practice guidance. These are outlined in the Decommissioning Plan (Appendix 4-8) that has been prepared for the Proposed Project.		
MM128	Decommissioning Phase	EIAR Chapter 15 Appendix 4-8	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 4-8 Decommissioning Plan. This plan will include preparation of a material recycling / disposal and traffic management plan for agreement with the local authority prior to decommissioning, in accordance with Scottish		



			Natural Heritage report (SNH) <i>Research and Guidance on Restoration and Decommissioning of Onshore Wind Farms</i> (SNH, 2013).		
MM136	Decommissioning Phase	EIAR Chapter 15 Appendix 4-8	As stated in Section 15.2 in Chapter 15, the potential for electromagnetic interference from wind turbines occurs only during the operational phase of the Proposed Project. There are no electromagnetic interference impacts associated with the decommissioning phase of the Proposed Project, and therefore no mitigation is required.		

## 8. **MONITORING PROPOSALS**

All monitoring proposals relating to the pre-commencement, construction and operational phases of the Proposed Project were set out in various sections of the EIAR and NIS prepared as part of the planning permission application to An Coimisiún Pleanála.

This section of the Decommissioning Plan groups together all of the decommissioning phase monitoring proposals presented in the planning documentation. The monitoring proposals are presented in table format to provide an easy-to-audit list that can be reviewed and reported on during the decommissioning phase of the Proposed Wind Farm.

Table 8-1 Proposed Monitoring Measures

Ref No.	Reference Heading	Reference Location	Monitoring Measure	Frequency	Reporting Period	Responsibility
<b>Decommissioning Phase</b>						
MX21	Decommissioning	Appendix 4-8	<p>As noted in the Scottish Natural Heritage report (SNH) <i>Research and Guidance on Restoration and Decommissioning of Onshore Wind Farms</i> (SNH, 2013) reinstatement proposals for a wind farm are made approximately 30 years in advance, so within the lifespan of the wind farm, technological advances and preferred approaches to reinstatement are likely to change. According to the SNH guidance, it is therefore:</p> <p><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>In this regard, the Decommissioning Plan (DP) (Appendix 4-8) 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 at the time of decommissioning.</p>	End of Operational Life	As Required	Developer Appointed/ Contractor
MX22	Decommissioning	Appendix 4-8	<p>The EnvCoW will maintain responsibility for monitoring the decommissioning works and Contractors/Sub-contractors from an environmental perspective. The EnvCoW will act as the regulatory interface on environmental matters. The Site Manager will be responsible for reporting to and liaising with OCC and other statutory bodies as required.</p>	End of Operational Life	As Required	Site Manager/ EnvCoW

MX23	Decommissioning	Appendix 4-8	The Site Manager in consultation with the EnvCoW will be responsible for employing the services of a suitably qualified ecologist and any other suitably qualified professionals as required throughout the decommissioning works.	End of Operational Life	As Required	Site Manager/ EnvCoW
MX24	Decommissioning	Appendix 4-8	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.	End of Operational Life	As Required	Project Ecologist
MX25	Health and Safety	Appendix 4-8	<ul style="list-style-type: none"> <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>	End of Operational Life	As Required	PSDecS
MX26	Birds	Appendix 7-7	<ul style="list-style-type: none"> <li>➤ 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.</li> <li>➤ 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 of 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</li> </ul>	End of Operational Life	As Required	Project Ornithologist

			<p>season (e.g., October) and continue if there is evidence to justify continuing (i.e. potential roosting behaviour of birds of conservation concern).</p> <ul style="list-style-type: none"> <li>➤ 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.</li> <li>➤ 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 decommissioning staff. The restricted area will also be marked to alert all personnel on site to the suspension of works within that area.</li> </ul>			
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## 9. COMPLIANCE AND REVIEW

### 9.1 Site inspections and Environmental Audits

Routine inspections of decommissioning activities will be carried out on a daily and weekly basis by the EnvCoW and the Site Supervisor/Decommissioning Manager to ensure all controls to prevent environmental impacts, relevant to the decommissioning activities taking place at the time, are in place.

Environmental inspections will ensure that the works are undertaken in compliance with this Decommissioning Plan and all other planning application documents. Only suitably trained staff will undertake environmental site inspections.

### 9.2 Auditing

Environmental audits will be conducted at planned intervals to determine whether the Decommissioning Plan is being properly implemented and maintained. The results of environmental audits will be provided to project management personnel. In contrast to monitoring and inspection activities, audits are designed to shed light on the underlying causes of non-compliance and not merely detect the non-compliance itself. In addition, audits are the main means by which system and performance improvement opportunities may be identified. Environmental audits will be carried out by the EnvCoW on behalf of the appointed contractor. It is important that an impartial and objective approach is adopted.

Once the Proposed Wind Farm has been decommissioned and all identified infrastructure removed from the site, a report of compliance with decommissioning works mitigation measures will be prepared.

### 9.3 Environmental Compliance

The following definitions shall apply in relation to the classification of Environmental Occurrences during decommissioning of the Proposed Wind Farm:

**Environmental Near Miss:** An occurrence which if not controlled or due to its nature could lead to an Environmental Incident.

**Environmental Incident:** Any occurrence which has potential, due to its scale and nature, to migrate from source and have an environmental impact beyond the site.

**Environmental Exceedance Event:** An environmental exceedance event occurs when monitoring results indicate that limits for a particular environmental parameter (as indicated in the Environmental Monitoring Programme) has been exceeded.

An exceedance will immediately trigger an investigation into the reason for the exceedance occurring and the application of suitable mitigation where necessary.

Exceedance events can be closed out on achieving a monitoring result below the assigned limit for a particular environmental parameter.

**Environmental Non-Compliance:** Non-fulfilment of a requirement and includes any deviations from established procedures, programs and other arrangements related to the EMP.

9.4

## Corrective Action Procedure

A corrective action is implemented to rectify an environmental problem on-site. Corrective actions will be implemented by the Site Supervisor/Decommissioning Manager, as advised by the Site Environmental Clerk of Works. Corrective actions may be required as a result of the following:

- > Environmental Audits;
- > Environmental Inspections and Reviews;
- > Environmental Monitoring;
- > Environmental Incidents; and
- > Environmental Complaints.

A Corrective Action Notice will be used to communicate the details of the action required to the main contractor. A Corrective Action Notice is a form that describes the cause and effect of an environmental problem on site and the recommended corrective action that is required. The Corrective Action Notice, when completed, will include details of close out and follow up actions.

If an environmental problem occurs on site that requires immediate attention direct communications between the Site Supervisor/Decommissioning Manager and the EnvCoW will be conducted. This in turn will be passed down to the site staff involved. A Corrective Action Notice will be completed at a later date.

9.5

## Decommissioning Plan Review

This Decommissioning Plan will be reviewed and updated prior to commencement of any decommissioning works. In accordance with the guidelines set out in the SNH (2013) document pertaining titled '*Research and guidance on restoration and decommissioning of onshore wind farms*', further updates will be completed to the plan during decommissioning works to adapt to specific situations or site conditions which may be encountered and consequently need to be considered by the plan.

This report provides the environmental management framework to be adhered to during the decommissioning phase of the Proposed Wind Farm, and it incorporates the mitigating principles to ensure that the work is carried out in a way that minimises the potential for any environmental impacts to occur.

## Bibliography

EPA, 2021. Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects. Ireland. Available at: <https://www.epa.ie/publications/circular-economy/resources/CDWasteGuidelines.pdf>

HSA, 2017. Guidelines on the Procurement, Design and Management Requirements of the Safety health and Welfare at Work (Construction) Regulations 2013 (Updated). Health and Safety Authority, Ireland. Available at: [https://www.hsa.ie/eng/publications\\_and\\_forms/publications/construction/guidelines\\_on\\_the\\_procurement\\_design\\_and\\_management\\_requirements\\_of\\_the\\_safety\\_health\\_and\\_welfare\\_at\\_work\\_construction\\_regulations\\_2013\\_updated\\_.pdf](https://www.hsa.ie/eng/publications_and_forms/publications/construction/guidelines_on_the_procurement_design_and_management_requirements_of_the_safety_health_and_welfare_at_work_construction_regulations_2013_updated_.pdf)

SNH, 2013. Research and Guidance on Restoration and Decommissioning of Onshore Wind Farms. Scottish Natural Heritage (now NatureScot). Available at: <https://www.nature.scot/doc/naturescot-commissioned-report-591-research-and-guidance-restoration-and-decommissioning-onshore>