CARRAIGIN POWER LTD

CARRIGEEN RENEWABLE ENERGY DEVELOPMENT, COUNTY ROSCOMMON

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

MANAGEMENT PLAN 6

DECOMMISSIONING PLAN

March 2026

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DOCUMENT APPROVAL

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Date March 2026	Signature	Signature

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1 INTRODUCTION

This Decommissioning Plan has been prepared by Jennings O'Donovan & Partners Limited on behalf of Carraigin Power Limited for the Decommissioning of the Carrigeen Renewable Energy Development and relevant infrastructure which is hereafter referred to as the Project. This document is being prepared, alongside an Environmental Impact Assessment Report (EIAR), as part of an application for planning permission for the Project to An Coimisiún Pleanála.

Decommissioning of the Project will be scheduled to take place after the proposed 35-year operational life of the Project.

This report provides the environmental management framework to be adhered to during the Decommissioning phase of the Project 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.

As noted in the Scottish Natural Heritage report 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. Due to the efficiency of modern-day turbines, it is estimated that their lifespan will be 35-years. The technological advances and preferred approaches to reinstatement are likely to change in the intervening decades.

In this regard, this Decommissioning Plan will be reviewed and updated for the written agreement of the Planning Authority prior to commencement of a decommissioning works. It will take account of the relevant conditions of the planning permission and current health and safety standards in accordance with the approach set out and the principles established in this document.

1.1 Scope of the Decommissioning Plan

This plan for the decommissioning of the Project does not include its connection to the national grid. Where the term 'Wind Farm Site' is used in the Decommissioning Plan it refers to the Wind Farm Site of the Project and all works associated with the Project including enabling works as described in **Section 2.6** of Chapter 2 of the EIAR. 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 eight sections, as outlined below:

Section 1: Provides a brief introduction as to the scope of the report.

Section 2: Outlines the Wind Farm Site and Project details, detailing the targets and objectives of this plan along with 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 Wind Farm Site including the mechanisms for implementation. A waste management plan is also included in this section.

Section 4: Outlines the Emergency Response Procedure to be adopted in the event of an emergency in terms of Wind Farm Site health and safety and environmental protection.

Section 5: Sets out a programme for the timing of the works.

Section 6: Consists of a summary table of all mitigation measures to be adhered to during the decommissioning-phase.

Section 7: Outlines the proposals for reviewing compliance with the provisions of this report.

2 WIND FARM SITE AND PROJECT DETAILS

2.1 Wind Farm Site Location and Description

The Project is located 12km north-east of Castlerea and 16km south-west of Carrick-on-Shannon. The nearest centre of population to the Wind Farm Site is the small village of Frenchpark, which occurs along the N5 regional road around 2.1km to the northwest of the closest turbine (T2). The Wind Farm Site elevations range from 65 m above ordnance datum (AOD) in the western section of the Wind Farm Site to 76 m AOD towards the eastern section of the Wind Farm Site

The Project is located in a rural setting and housing density in the area is low predominantly comprising one-off houses and farm holdings. There are 196 dwellings within a 2km radius of the proposed turbines (Figure 1.3).

A full description of the Project is provided in **Chapter 2: Project Description**.

Permission is being sought by the Applicant for the construction of 11 No. Wind Turbines, Turbine Foundations, Turbine Hardstands, Site Access Roads, a 30m Meteorological Mast, Onsite Substation, Internal Cabling, Temporary Construction Compounds, Borrow Pit, Peat and Spoil Management Area, Grid Connection and all ancillary and associated works.

2.2 Description of the Decommissioning

The Project will consist of the following:

- **Wind Turbines:** Dismantling and removal of the 11 wind turbines, including blades, rotor, hub, nacelle, and towers.
- **Internal Wind Farm Cabling:** The Internal Cabling will be removed from the ducting and taken to a recycling facility. The cable ducting will be left in-situ as it is considered the most environmentally prudent option, avoiding unnecessary excavation and soil disturbance
- **Meteorological Mast:** The 30-meter meteorological mast will be dismantled and removed.

The Onsite Substation and Grid Connection will remain in place as they will be under the ownership and control of ESBN and EirGrid.

All other elements of the Project will remain in-situ. The Wind Farm Site Access Roads and associated drainage systems will serve ongoing activity in the area. All other hard surfaced

areas will be allowed to revegetate naturally. Based on the experience of the project team monitoring operational Wind Farm Sites throughout the country, the approach of allowing these areas to revegetate naturally has proven to be very successful.

Cranes of similar size to those used for construction will disassemble each turbine using the same crane hardstands. The towers, blades and all above ground components will be removed from Wind Farm Site and reused, recycled, or disposed of in a suitably licenced facility.

Where necessary, turbine components will be cut on the Wind Farm Site so as to fit on articulated trucks, therefore allowing the use of the civil construction delivery route for removal. The bridge crossings will be used during the Decommissioning phase and it is proposed to leave these in-situ post the Decommissioning phase. It is considered that their removal will be the least preferred option in terms of potential effects on the environment.

The following elements are included in the decommissioning phase:

- Decommissioning works will be limited to actions necessary to remove the wind farm structures, i.e., removal of Wind Turbines, Internal Cabling and the meterological mast.
- Existing Hardstands will be utilised to act as a temporary compound for the appointed Contractor.
- Roads and associated drainage systems will remain in place to serve ongoing forestry and agriculture activity[1]. Hardstanding areas will be allowed to revegetate naturally.
- Turbine plinths will be removed, and the hardcore covering turbine foundations will be allowed to revegetate naturally[2]. The turbine foundations will be left in-situ as it is considered that their removal will be the least preferred option in terms of potential effects on the environment.
- Soil disturbance will be avoided.

2.3 Targets and Objectives

This Decommissioning plan has considered environmental issues as listed in **Section 3.**

The key targets are as follows:

[1] For a wind farm where the roads are not to be retained, natural revegetation is preferred to reprofiling, or the importation of soil.
[2] The covering of turbine foundations with soil material was discussed, and discounted. Instead, the possibility was discussed of roughening the surface of the concrete foundation, to assist in the initiation and subsequent growth and coalescence of flora. However, the foundations will in fact be covered with hardcore, so this step is unnecessary.

- Ensure Decommissioning works and activities are completed in accordance with mitigation and best practice approach presented in the accompanying Environmental Impact Assessment Report (EIAR) and associated planning documentation. A Schedule of Mitigation Measures has been included in **Chapter 22** of the EIAR.
- Ensure Decommissioning works and activities have minimal impact/disturbance to local landowners and the local community. This will relate to transport, particularly of material, off the Wind Farm Site with noise and dust also impacting on receptors at time of decommissioning to a lesser extent.
- Ensure Decommissioning works and activities have minimal impact on the natural environment. Disturbance to habitats will be avoided and the use of existing infrastructure and drainage will ensure silt does not enter waterways.
- Adopt a sustainable approach to Decommissioning. This means comparing alternative methods for turbine disassembly and taking the approach with the least impact on the natural environment.
- Provide toolbox talks, environmental training and awareness of sensitive receptors and waste management within the proposed Project for all project personnel.

The key Wind Farm Site objectives are as follows:

- 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, in accordance with the **Water Quality Management Plan (MP2)**. Similar mitigation measures to the construction phase will be implemented. Please **Section 3** for more details.
- Keeping all watercourses free from obstruction and debris.
- Sustainable drainage system /drainage design principles will be maintained and monitored to ensure efficiency.
- Keep impact of decommissioning works to a minimum on the local environment, namely watercourses, and wildlife through the use of defences such as buffers and silt fences.
- 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.
- Monitoring of the works and any adverse effects that it may have on the environment.
- Avoidance of vandalism.

Section 3 discusses the above in more detail.

2.4 Decommissioning Methodologies Overview

2.4.1 Introduction

An experienced main contractor will be appointed to undertake the decommissioning of the proposed Project. The main contractors will comply with the mitigation measures of the Construction and Environmental Management Plan (CEMP) prepared for the construction phase. An overview of the Decommissioning methodologies is provided below.

2.4.2 Decommissioning Methodology

The proposed Decommissioning methodology is summarised under the following main headings:

- Wind Turbines
- Turbine Foundations.
- Internal Cabling.

2.4.2.1 Wind Turbines

Prior to any works being undertaken on wind turbines, they will be disconnected from the grid by the Wind Farm Site operator in conjunction with ESB Networks and EirGrid. The dismantling and removal of wind turbines of this scale is a specialist operation which will be undertaken by the turbine supplier or competent subcontractor. Wind Turbine dismantling will be undertaken in reverse order to methodology employed during their construction. Cranes will be brought back to the Wind Farm Site utilising the existing hardstand areas. The dismantling of turbines 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 turbine blades will be cut on Wind Farm Site and removed in articulated trucks, the details of which are assessed in **Chapter 16: Traffic & Transport** of the EIAR which accompany this application.

The transport of disassembled turbines from the Wind Farm Site will be undertaken in accordance with a **Traffic Management Plan** (**Appendix 16.2** of the EIAR). The Traffic Management Plan 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.

The Met Mast will also be removed as its purpose will cease once the turbines have been dismantle and removed. The Met Mast is solely a requirement of the operational phase to satisfy EirGrid's requirements.

2.4.2.2 Turbine Foundations

On the dismantling of turbines, it is not intended to remove the concrete foundations from the ground. It is considered that their removal will be the least preferred options in terms of potential effects on the environment. Turbine plinths will be removed and covered in topsoil and will be allowed to revegetate naturally.

2.4.2.3 Underground Cabling

The Internal Cabling will be pulled from the cable duct using a mechanical winch which will extract the cable and re-roll it on to a cable drum.

The cable ducting will be left in-situ as it is considered the most environmentally prudent option, avoiding unnecessary excavation and soil disturbance for an underground element that is not visible with no environmental impact.

The Onsite Substation and associated grid connection will remain in place as it will be under the ownership and control of the ESBN and EirGrid and will form a permanent part of the national electricity grid.

2.4.2.4 Transport Route Accommodation Works

Where necessary, Wind Turbine components will be cut at the hardstand locations on the Wind Farm Site so as to fit on articulated trucks, therefore allowing the use of the civil construction delivery route for removal. There will be no need for additional temporary works on Site Access Roads for the removal of turbines.

3 ENVIRONMENTAL CONTROLS

The following sections give an overview of the drainage design, dust and noise control measures, a **Waste Management Plan (MP5)** for the Wind Farm Site and the implementation of the environmental management procedures for the Wind Farm Site. Based on the nature and extent of the Decommissioning works these are the key on the Wind Farm Site controls that are applicable at Decommissioning. (Associated mitigation measures are described in **Section 6**).

3.1 Wind Farm Site Drainage

The Wind Farm Site drainage features for this Wind Farm Site during its construction and operation are outlined in the EIAR and the **Surface Water Management Plan (MP3)** which accompany this application. This document has been prepared on a preliminary (outline) basis and will be further developed and expanded following the appointment of the Contractors for the main construction/Decommissioning works. Some items of this CEMP can only be finalised with appropriate input from the Contractors who will carry out the main construction and Decommissioning works. This CEMP identifies, for the incoming Contractors, the key planning, environmental and contract document constraints that must be adhered to in order to deliver optimum environmental reassurance for the Wind Farm Site. As stated in **Section 2.2**, the drainage system will serve ongoing activity on the area.

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 measures, will be included in that document. However, it should be noted that by the time Decommissioning is undertaken after the planned 35-year lifespan of the Project, the areas within the Wind Farm Site will have revegetated substantially resulting in a drainage pattern that is similar to what existed prior to any construction. It is not anticipated that the Decommissioning phase will interrupt this drainage regime in any way with the works proposed. As an additional measure, areas where freshly placed soil material as part of excavation works will be surrounded by silt fencing if deemed necessary until the area has naturally revegetated.

3.2 Refuelling; Fuel and Hazardous Materials Storage

The plant and equipment used during decommissioning will require refuelling during the works. Appropriate management of fuels will be required to ensure that incidents relating to refuelling are avoided. The following mitigation measures, which are the same as those proposed for the construction phase, are proposed to avoid release of hydrocarbons at the Wind Farm Site:

- Wherever possible, vehicles will be refuelled off-site, particularly for regular road-going vehicles.
- All plant will be inspected and certified to ensure that they are leak free and in good working order prior to use at the Wind Farm Site.
- On-site refuelling of machinery will be carried out at designated refuelling areas at various locations throughout the Wind Farm Site.
- Heavy plant and machinery will be refuelled on-site by a fuel truck, with spill kits kept onboard, that will come to the Wind Farm Site as required on a scheduled and organised basis.
- Other refuelling will be carried out using mobile double skinned fuel bowser. The fuel bowser will be parked on a level area on the hardstanding areas when not in use
- Only designated trained operatives will be authorised to refuel plant on the Wind Farm Site;
- Refuelling or maintenance of machinery will not occur within the delineated hydrological buffer zones;
- Fuels stored on the Wind Farm Site will be minimised;
- Any diesel or fuel oils stored at the hardstanding areas will be bunded. The bund capacity will be sufficient to contain 110% of the storage tank's maximum capacity; and,

An emergency plan for the construction phase to deal with accidental spillages will be contained within **Section 6.1.1** of **Management Plan 1- Emergency Response Plan**. Spill kits will be available to deal with accidental spillages.

3.3 Dust Control

Dust is unlikely to be generated in significant amounts from activities during Decommissioning. The extent of dust generation will depend on the type of activity undertaken, the proximity of activities to receptors and 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. Wind Farm Site traffic movements also have the potential to generate dust as they travel along the haul route.

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

- Approach roads and construction areas will be cleaned on a regular basis to prevent build-up of mud and prevent it from migrating around the Wind Farm Site and onto the public road network.

- Wheel wash facilities will be provided near the Wind Farm Site entrance to prevent mud/dirt being transferred from the Wind Farm Site to the public road network. The Wheel wash will be located outside the 50m watercourse buffer zone.
- Public roads along the construction haul routes will be inspected and cleaned daily. In the unlikely event that dirt/mud is identified on public roads, the roads will be cleaned. The wheel wash facility will be investigated and the problem fixed to prevent this from happening again.
- During periods of dry and windy weather, there is potential for dust to become friable and cause nuisance to nearby residences and users of the local road network. This requires wetting material and ensuring water is supplied at the correct levels for the duration of the work activity. The weather will be monitored so that the need for damping down activities can be predicted. Water bowsers will be available to spray work areas (Turbine Hardstand areas and Grid Connection route) and construction haul route roads to suppress dust migration from the Wind Farm Site.
- Speed restrictions of 15km/h on Wind Farm Site Access Roads will be implemented to reduce the likelihood of dust becoming airborne. Consideration will be given to how Wind Farm Site speed limits are policed by the Contractor and referred to in the toolbox talks.

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 Wind Farm Site. Proposed measures, which are the same as those proposed for the construction phase, to control noise include:

- Diesel generators will be enclosed in sound proofed containers to minimise the potential for noise impacts.
- Plant and machinery with low inherent potential for generation of noise and/or vibration will be selected. All plant and equipment to be used on the Wind Farm Site will be modern equipment and will comply with the S.I. No. 359/1996 - European Communities (Construction Plant and Equipment) (Permissible Noise Levels) (Amendment) Regulations.
- Regular maintenance of plant will be carried out in order to minimise noise emissions. Particular attention will be paid to the lubrication of bearings and the integrity of silencers.
- All vehicles and mechanical plant will be fitted with effective exhaust silencers and maintained in good working order for the duration of the works.
- Compressors will be of the “sound reduced” 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.

- Machines, which are used intermittently, will be shut down during those periods when they are not in use.
- Training will be provided by the Wind Farm Site Manager to drivers to ensure smooth machinery operation/driving, and to minimise unnecessary noise generation.
- Local areas of the haul route will be condition monitored and maintained, if necessary.

3.5 Invasive Species Management

Prior to decommissioning, a suitably qualified ecologist will complete an invasive species survey of the Wind Farm Site to identify invasive species where any excavation will be required. An Invasive Species Management Plan will be implemented if invasive species are identified.

3.6 Traffic Management

A Traffic Management Plan will be prepared in advance of any decommissioning works. The traffic management arrangements for the removal of turbines although similar to those that will be implemented for construction materials delivery (to a lesser extent) as outlined in the EIAR, will be agreed in advance of decommissioning with the competent authority.

The Traffic Management Plan for the decommissioning phase will also include provision for the removal of underground cabling from the underground ducts within the Wind Farm Site. The Grid Connection will be left in-situ as they will be under the ownership and control of ESBN and EirGrid.

3.7 Waste Management Plan

The Waste Management Plan (MP5) outlines the best practice procedures during the decommissioning of the proposed Project. The Waste Management Plan 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.

3.7.1 Legislation

The Waste Management Act 1996 as amended requires that any waste related activity has to have all necessary licenses and authorisations. It will be the duty of the Waste Manager 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 hired 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 similar or less than those anticipated and assessed for the construction phase.

The Department of the Environment provides a document entitled, 'Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects' (2006). No demolition will take place at this Wind Farm Site.

3.7.2 Waste Management Hierarchy

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

1. Prevention and Minimisation:

The primary aim of the Waste Management Plan will be to prevent and thereby reduce the amount of waste generated.

2. Reuse of Waste:

No material is likely to be reused on the Wind Farm Site during the Decommissioning phase. Materials such as cabling will be reused offsite.

3. Recycling of Waste:

There are several established markets available for the beneficial use of Construction and Demolition waste such as recycling turbine components.

4. Disposal of Waste to Landfill

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

3.7.3 Waste Arising from Decommissioning

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

The waste types arising from the Decommissioning of the Wind Farm Site are outlined in **Table 3.1** below.

Table 3.1 Waste Types Arising during the Decommissioning Phase

Material Type	Example	EWC Code
Cables	Electrical wiring	17 04 11
Metals	Copper, aluminium, lead and iron	17 04 07
Fibreglass	Turbine blade component	10 11 03
Hydrocarbons	Oils and lubricants drained from the turbines	13 01 01,13 02 04

3.7.3.1 Reuse

Many construction materials can be reused several times before they need to 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.

3.7.3.2 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 and Met Mast.

All wastes will be sorted and segregated on the Wind Farm Site during the time of decommissioning. The anticipated volume of all waste material to be generated at the Carrigeen Renewable Energy Development is low which provides the justification for adopting small containers as a method of waste storage.

3.7.3.3 Implementation

3.7.3.3.1 Roles and Responsibilities

The Ecological Clerk of Works will have responsibility for overseeing and the implementation of the objectives of the Decommissioning plan, ensuring that all hired waste contractors have the necessary authorisations and that the waste management hierarchy is adhered to. The person nominated will have sufficient authority so that they can ensure everyone working on the decommissioning adheres to the management plan.

3.7.3.3.2 Training

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

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

3.7.3.3.3 Record Keeping

The Waste Management Plan will provide systems that will enable all arisings and movements of construction waste to be recorded. This system will enable the contractor to measure and record the quantity of waste being generated. The Waste Management Plan can then be adapted with changes that are seen through record keeping.

3.7.3.4 Waste Management Plan Conclusion

The Waste Management Plan will be properly adhered to by all staff involved in the proposed Project and will be outlined within the induction process for all Wind Farm Site personnel. Reuse of certain types of decommissioning wastes will cut down on the cost and requirement of raw materials at other wind farm sites therefore further minimising waste levels going to landfill. This Waste Management Plan outlines the main objectives that are to be adhered to.

3.8 Environmental Management Implementation

3.8.1 Roles and Responsibilities

The Site Manager and/or ECoW will be key members of the Contractors team.

In general, the Ecological Clerk of Works will maintain responsibility for monitoring the decommissioning works and Contractors/Sub-contractors from an environmental perspective. The Ecological Clerk of Works will act as the regulatory interface on environmental matters. The Wind Farm Site Manager will be responsible for reporting to and liaising with Roscommon Country Council and other statutory bodies as required.

A suitably qualified and experienced ecologist and any other suitably qualified and experienced professionals such as engineers and geotechnical experts will further advise the

Ecological Clerk of Works and Wind Farm Site Manager. This will ensure there is no negative impact on the environment as a result of the decommissioning of the proposed Project.

4 EMERGENCY RESPONSE PLAN

An Emergency Response Plan provides details of procedures to be adopted in the event of an emergency in terms of Wind Farm Site health and safety and environmental protection.

4.1 Emergency Response Procedure

The Wind Farm Site **Emergency Response Plan (MP1)** which accompanies this application includes details the response required and the responsibilities of all personnel in the event of an emergency. The Emergency Response Plan will require updating and submissions from the Contractor/Project Supervisor Decommissioning Stage (appointed to manage and co-ordinate health and safety matters during the construction stage) and sub-contractors as decommissioning progresses. Where sub-contractors are governed by their own emergency response procedure a bridging arrangement will be adopted to allow for inclusion of the sub-contractor's Emergency Response Plan within this document.

4.1.1 Roles and Responsibilities

The chain of command during an emergency response sets out who is responsible for coordinating the response. The Wind Farm Site Supervisor/Construction Manager will lead the emergency response which makes him responsible for activating and coordinating the emergency response procedure. The other Wind Farm Site personnel who can be identified at this time who will be delegated responsibilities during the emergency response are presented in **Plate 4.1.** In a situation where the Wind Farm Site Supervisor/ Construction Manager is to coordinate the emergency response, the responsibility will be transferred to the next person in the chain of command outlined in **Plate 4.1**. This will be updated throughout the various stages of the proposed Project

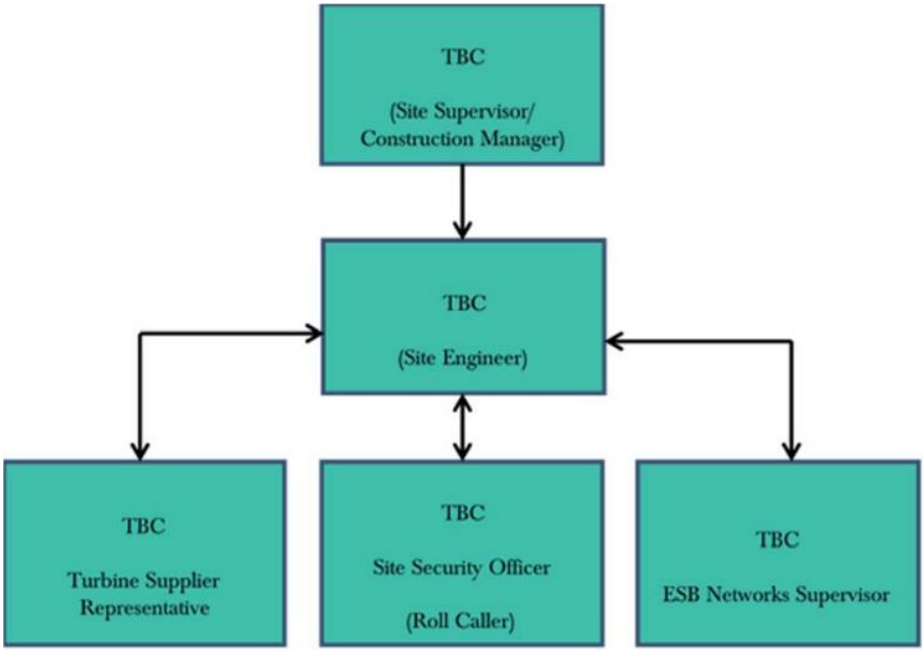

Figure 4.1 Emergency Response Procedure Chain of Command

4.1.2 Initial Steps

The following hazards have been identified as being potential situations that may require an emergency response in the event of an occurrence.

Table 4.1 Hazards Associated with Potential Emergency Situations

Hazard	Emergency Situation
Construction Vehicles: Dump trucks, tractors, excavators, cranes etc.	Collision or overturn which has resulted in operator or third-party injury.
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 Wind Farm 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 such as the hazards outlined in **Table 4.1** the Wind Farm Site Construction Manager will carry out the following:

- Establish the scale of the emergency situation and identify the number of personnel, if any, who have been injured or are at risk of injury.
- Where necessary, sound the emergency siren/foghorn that activates an emergency evacuation on the Wind Farm Site. The Wind Farm Site 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 Wind Farm Site Manager will be required to use their own discretion at that point. In the case of fire, the emergency evacuation of the turbines and substation should proceed, without exception. The Wind Farm Site evacuation procedure is outlined in **Section 4.1.3**.
- Make safe the area, if possible, and ensure that 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 4.2** 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 numbers for which are provided in **Section 4.2**.
- Contact the next of kin of any injured personnel where appropriate.

4.1.3 Wind Farm Site evacuation/Fire Drill

A Wind Farm Site evacuation/fire drill procedure will provide basis for carrying out the immediate evacuation of all Wind Farm 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 construction compound area and will be marked with a sign. All Wind Farm Site personnel will assemble at this point.
- A roll call will be carried out by the Wind Farm Site Security Officer to account for all personnel on Wind Farm Site.
- The Wind Farm Site Security Officer will inform the Wind Farm Site Manager when all personnel have been accounted for. The Wind Farm Site Supervisor/Construction

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 Wind Farm 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.

4.1.4 Spill Control Measures

Every effort will be made to prevent an environmental incident during the decommissioning phase of the proposed Project. Oil/fuel spillages if arising, are likely to be small and localised. The importance of a swift and effective response in the event of a spill is important. The following steps provide the procedure to be followed in the event of such an incident:

- Stop the source of the spill 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 necessary, cover or bund off any vulnerable areas where appropriate such as drains, watercourses or sensitive habitats.
- Clean up as much as possible using the spill control materials.
- Contain any used spill control material. Dispose of used materials appropriately using a fully licensed waste contractor with the appropriate permits so that further contamination is limited.
- Notify the Ecological Clerk of Works immediately giving information on the location, type and extent of the spill so that they can take appropriate action.
- The Ecological Clerk of Works will inspect the Wind Farm Site and ensure the necessary measures are in place to contain and clean up the spill and prevent further spillage from occurring.
- The Ecological Clerk of Works will notify the appropriate regulatory body such as Roscommon County Council, and the Environmental Protection Agency, if deemed necessary.

4.1.5 Environmental Investigation

Any environmental incident must be investigated in accordance with the following steps:

- The ECoW will be immediately notified.

- If necessary, the ECOW will inform the appropriate regulatory authority. The 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.
- If the incident has impacted on a sensitive receptor, such as an archaeological feature, the Ecological Clerk of Works will halt work and will liaise with the Project Hydrologist, Ecologists, Archaeologist.
- A record of all environmental incidents will be kept on file by the Ecological Clerk of Works and the Main Contractor. These records will be made available to the relevant authorities such as Roscommon County Council, Environmental Protection Agency if required.

The Ecological Clerk of Works 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.

4.2 Contact the Emergency Services

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

- Ring 999 **or** 112.
- Clearly state the situation and the location.
- Await further instructions from Emergency Services.

Table 4.2 Emergency Contacts

Contact	Telephone no.
Client – Carraigin Power Limited	(021) 733 6034
Doctor – Castlerea Health Centre	094 962 1199
Emergency Services – Ambulance, Fire, Gardaí	999/112

Contact	Telephone no.
ESB Emergency Services	1850 372 999
Gas Networks Ireland Emergency	1850 20 50 50
Gardaí – Castlerea District Headquarters	063 21770
Health and Safety Co-ordinator - Health & Safety Services	TBC
Health and Safety Authority	1890 289 389
Inland Fisheries Ireland (IFI)	0818 34 74 24
Project Supervisor Construction Stage (PSCS): TBC	TBC
Project Supervisor Design Stage (PSDS)*: Jennings O'Donovan & Partners Limited	071 916416

* Oversees the coordination of the design with the design team, architects engineers etc.

5 PROGRAMME OF WORKS

5.1 Decommissioning Schedule

The decommissioning phase will take approximately 3 – 6 months to complete from commencing the removal of turbines to the final reinstatement of the Wind Farm Site.

The decommissioning of the Wind Farm Site will take place after the 35-year operational period of the planning permission period has elapsed.

The phasing and scheduling of the main decommissioning task items are outlined in **Plate 5.1** below, where the 1st of January has been shown as an indicative start date for decommissioning to commence.

ID	Task Name	Task Description	Q1			Q2			Q3			
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	Site Health and Safety											
2	Turbine Decommissioning	Disconnect Power Output										
3	Turbine and Met Mast Dismantling	Disassemble turbine components and met mast										
4	Turbine Removal	Transport of all turbine components off site										
5	Cable Removal	Remove underground cables form ducting										
6	Turbine Foundations Backfill	Reinstate foundation areas by covering with soil material										

Figure 5.1 Indicative Decommissioning Schedule

6 MITIGATION PROPOSALS

The decommissioning Mitigation Measures are presented in **Table 6.1. Chapter 22** of the EIAR it provides a full list of pre-construction, construction and decommissioning mitigation measures.

By presenting the mitigation proposals in the below format, it is intended to provide an easy to audit list that can be reviewed and reported on during the decommissioning phase of the Wind Farm Site.

Table 6.1 Mitigation Measures

Ref. No.	Reference Location	Mitigation Measure	Audit Result	Action Required
		Decommissioning Phase		
MM1	Chapter 6: Biodiversity, Section 6.4.6 Decommissioning Phase Impacts	Prior to the Decommissioning work, a comprehensive plan will be drawn up and submitted to the relevant Planning Authority for written agreement. The plan will take account of the findings of the EIAR for the present project and the contemporary best practice at that time, to manage and control the component removal and ground reinstatement.		
MM2	Chapter 9: Aquatic Ecology, 9.5.4 Decommissioning Phase Mitigation	Decommissioning of the Wind Farm will be scheduled to take place after the proposed 35- year lifespan has expired. A Site-specific **Decommissioning Management Plan (DMP)** (**Appendix 2.1 CEMP – MP6)** has been developed and will be amended prior to the commencement of any Decommissioning activities. The implementation of all mitigation measures detailed for the construction phase will be adopted in full during the Decommissioning phase to ensure all such significant effects are avoided. When the final Decommissioning Plan is prepared prior to Decommissioning and presented as a standalone document for consideration by the relevant authority at that time, all drainage management measures, which will include maintenance of the operational drainage measures, will be included in that document, as required. However, by the time Decommissioning is undertaken following the planned 35-year lifespan of the Project, areas within the Wind Farm Site are expected to be substantially revegetated and stabilised, with drainage patterns likely to be well established. It is therefore anticipated that the Decommissioning phase will not give rise to significant disruption of established drainage patterns. As a minimum measure, areas where freshly placed soil material as part of Turbine Foundation reinstatement works will be surrounded by silt fencing, where necessary, until the area has stabilised.		

Ref. No.	Reference Location	Mitigation Measure	Audit Result	Action Required
		Decommissioning Phase		
		The Grid Connection and the Onsite Substation will become an asset of the national grid under the management of ESB and EirGrid and will likely remain in place permanently upon Decommissioning of the Project as required by ESB/EirGrid. Wastewater from the Onsite Substation will continue to be treated, therefore no significant long-term effects on aquatic habitats or species are anticipated as a result of its permanent retention. However, regular maintenance of the drainage infrastructure will be necessary to ensure ongoing protection of downstream water quality and aquatic ecological receptors. Biodiversity enhancement measures as set out in the Biodiversity Enhancement Management Plan (**Appendix 6.2 BEMP**) will have become part of the fabric of the local ecology and will be retained for the benefit of the local wildlife. Restoration of the Wind Farm Site following Decommissioning will be informed by a review of environmental conditions at that time and by the updated Decommissioning Plan prepared prior to commencement of works.		
MM3	Chapter 11: Hydrology and Hydrogeology, 11.10 Mitigating Measures – Decommissioning Phase	Prior to the decommissioning work, a comprehensive plan will be drawn submitted to the local authority for approval that takes account of the findings of this EIAR and the contemporary legislative requirements at that time, to manage and control the component removal and ground reinstatement.		

7 COMPLIANCE AND REVIEW

7.1 Wind Farm Site Inspections and Environmental Audits

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

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. These staff will have undergone third level educational training and will have experience in a similar role.

7.2 Auditing

An Environmental audit will first be carried out prior to the decommissioning phase of the Project to ensure the implementation of mitigation measures. Further environmental audits will be carried on a monthly basis during the construction phase, and again during the decommissioning phase, of the Wind Farm Site.

Environmental audits will be carried out by the ECoW. An impartial and objective approach will be taken. Environmental audits will be conducted at monthly to determine to determine whether the Decommissioning Plan is being properly implemented and maintained. The results of environmental audits will be provided to the contractor.

An audit of compliance with the decommissioning mitigation measures will be completed by the ECoW during the decommissioning phase of the proposed Project. The findings of each audit will be documented by the ECoW in an audit report within the Decommissioning Plan for the Wind Farm Site. The audit report will be made available to Roscommon County Council on request.

7.3 Environmental Compliance

The following definitions will apply in relation to the classification of Environmental Occurrences during decommissioning of the proposed Project:

- **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 immediate area of the incident.
- **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.

Any of these events will immediately trigger an investigation into the reason for the incident 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 e.g. 25mg/L total suspended solids in waters (Inland Fisheries Ireland, 2016).

7.4 Corrective Action Procedure

A corrective action is implemented to rectify an environmental problem on-Wind Farm Site. Corrective actions will be implemented by the Wind Farm Site Manager, as advised by the ECoW. Corrective actions may be required as a result of the following:

- Environmental Audits
- Environmental Inspections and Reviews
- Environmental Monitoring
- Environmental Incidents
- 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 Wind Farm Site that requires immediate attention direct communications between the Wind Farm Site supervisor/Construction Manager and the Ecological Clerk of Works will be conducted. This in turn will be passed down to the Wind Farm Site staff involved. A Corrective Action Notice will be completed at a later date.

7.5 Decommissioning Plan Review

This Decommissioning Plan will be reviewed and confirmed prior to commencement of decommissioning works. Further details will be added to the plan during decommissioning works to adapt to specific situations or Wind Farm Site conditions that are encountered that need to be considered by the Plan.