# APPENDIX 4-6

## DECOMMISSIONING PLAN

Planning and Environmental Consultants

# Decommissioning Plan

## Glenard Wind Farm, Co. Donegal

# DOCUMENT DETAILS

| | |
|---|---|
| Client: | **FuturEnergy Ireland** |
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# Table of Contents

# 1. INTRODUCTION

This Decommissioning Plan has been prepared by MKO on behalf of Coillte CGA for the decommissioning of the proposed Glenard Wind Farm development and relevant infrastructure which is hereafter referred to as the Proposed Development. This document is being prepared, to accompany an Environmental Impact Assessment Report (EIAR), as part of an application for planning permission for the Proposed Development to An Bord Pleanála. Decommissioning of the Proposed Development will be scheduled to take place after the proposed 35-year lifespan of the project.

This report provides the environmental management framework to be adhered to during the decommissioning phase of the Proposed Development 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 (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 Decomissioning Plan will be reviewed and updated prior to commencement of an decommissioning works to take account of the relevant conditions of the planning permission and current health and safety standards. The Decomissioning Plan will be agree in writing with the Planning Authority prior to the the commencement of the decomissioing phase.

## 1.1 Scope of the Decommissioning Plan

This report is presented as a plan for the decommissioning of the Proposed Development including its connection to the national grid. Where the term 'site' is used in the Decommissioning Plan it refers to the site of the Proposed Development and all works associated with the Proposed Development including enabling works. 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 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 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 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. SITE AND PROJECT DETAILS

## 2.1 Site Location and Description

The core of the proposed development site is located within existing commercial forestry properties and agricultural lands, within the townlands listed in Table 2-1 below, on the Inishowen Peninsula of Co. Donegal. The site is located approximately 5.9km east of town of Buncrana which overlooks Lough Swilly and 6.2km west of the village of Quigley's Point (also known as Carrowkeel) which overlooks Lough Foyle. The site location is shown in Figure 2-1.

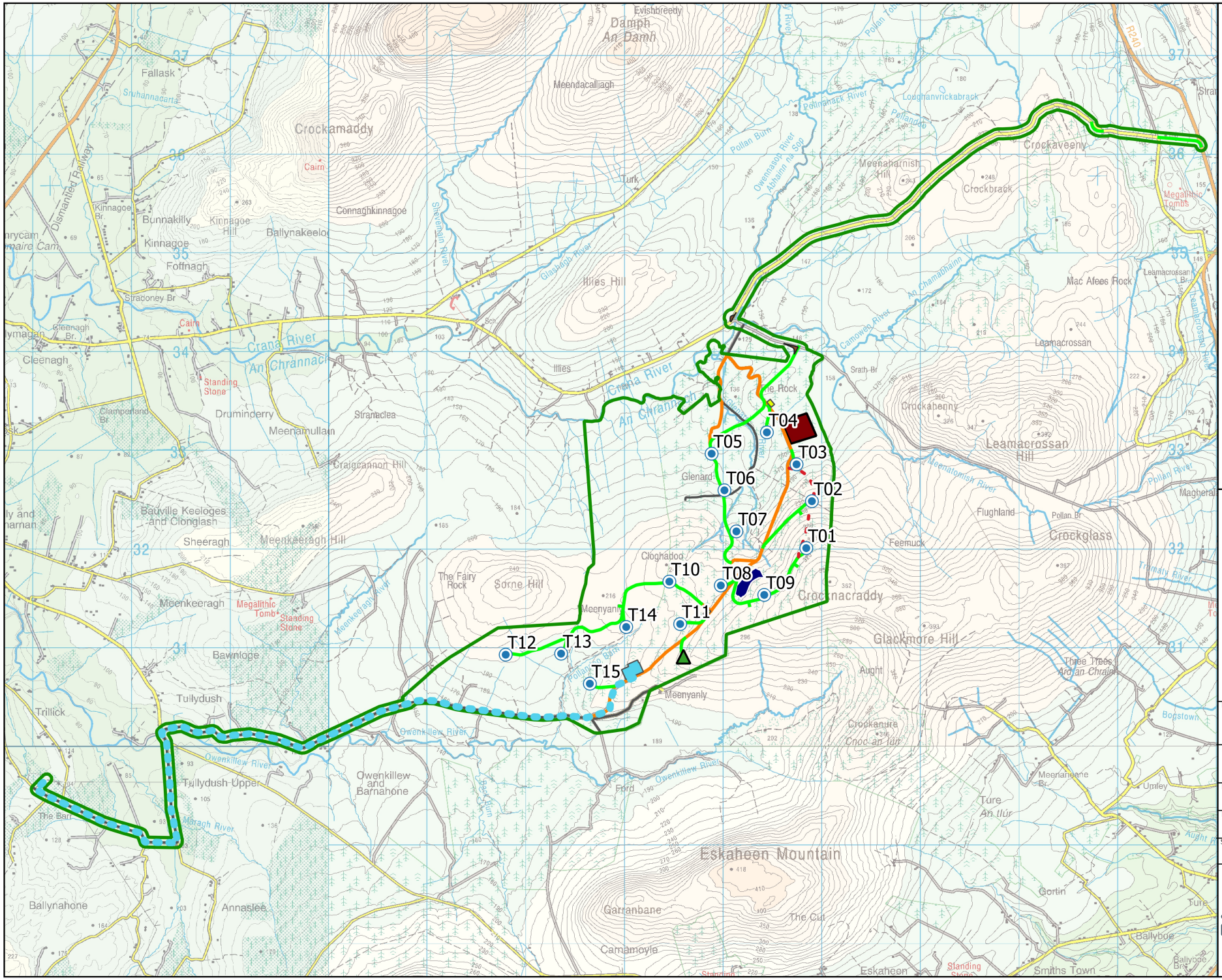
Access to and egress from the site, for Heavy Goods Vehicles (HGV) and abnormal loads (e.g. turbine components) will be via the proposed main site entrance, in the northeast of the site, off a local access road which in turn is accessed from the the L1731 local road. Secondary access junctions, located in the north and south of the site will be utilised to provide access for general site traffic such as construction staff and Light Goods Vehicles (LGV).

It is proposed to connect the development to the national electricity grid via an underground cable which will connect the proposed onsite substation to the existing Trillick substation. This connection and all associated works form part of the planning application.

## 2.2 Description of the Development

The proposed development comprises the construction of 15 No. wind turbines and all associated works. The proposed turbines will have a maximum blade tip height of up to 173 metres above the top of the foundation. The applicant is seeking a ten-year planning permission. The site layout showing individual elements of the Proposed Development is shown in Figure 2-1. The full description of the proposed development, as per the public planning notices, is as follows:

i. *Construction of 15 No. wind turbines and associated hardstand areas with the following parameters:*
    a. *a total tip height in the range of 162 metres minimum to 173 metres maximum,*
    b. *hub height in the range of 96 metres minimum to 107 metres maximum, and*
    c. *rotor diameter in the range of 132 metres minimum to 140 metres maximum*
ii. *1 no. 110kV permanent electrical substation including a control building with welfare facilities, all associated electrical plant and equipment, security fencing, all associated underground cabling, wastewater holding tank and all ancillary structures and works;*
iii. *All works associated with the permanent 110kV connection from the proposed substation to the national electricity grid, via underground cabling within permanent cable ducts in the townlands of Meenyanly, Carnamoyle, Sorne, Owenkillew and Barnahone, Meenakeeragh Tullydush Upper, Annaslee and Ballynahone to the existing Trillick 110kV substation in the townland of Ballynahone;*
iv. *All associated underground electrical and communications cabling connecting the turbines to the proposed wind farm substation;*
v. *1 no. Meteorological Mast of 104 metres in height;*
vi. *Upgrade of existing tracks and roads, provision of new permanent site access roads including a new site entrance (in the townland of Glenard);*
vii. *1 no. borrow pit;*
viii. *1 permanent no. peat and spoil repository area;*
ix. *Permanent placement of peat and spoil along sections of site access roads as part of the peat and spoil management plan for the site;*




## Map Legend

- EIAR Site Boundary
- Proposed Turbine Layout
- Proposed Substation Location
- Proposed Met Mast
- Proposed Borrow Pit
- Proposed Construction Compounds
- Proposed Peat and Spoil Respository Area
- Turbine Delivery Route Accomodation Works
- Proposed Grid Connection Route
- Proposed Amenity Walkway
- Proposed New Site Roads
- Existing Roads - Upgrade Proposed
- Existing Forestry Roads & Tracks



Drawing Title

Site Layout Map (Inc Turbine Accommodation Works Areas)

Project Title

Glenard Wind Farm

| Drawn By | Checked By |
|---|---|
| SD | EM |
| Project No. | Drawing No. |
| 190114 | Fig 2-1 |
| Scale | Date |
| 1:50000 | 01.02.2022 |

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x. *2 no. temporary construction compounds;*
xi. *Permanent recreation and amenity works, including marked trails, seating areas, amenity car park, and associated amenity signage;*
xii. *All temporary works associated with the facilitation of turbine component and abnormal load delivery;*
xiii. *Construction of a permanent link road between the R240 Regional Road and the L1731 local road; construction of a second permanent link road on the L1731; permanent road widening at three locations along the L1731 (in the townlands of Carrowmore or Glentogher and Illies) all of which will facilitate the delivery of abnormal loads to the site during the construction period and may be used during the operational period if necessary or to facilitate the decommissioning of the wind farm. Following the construction period, access to the link roads will be closed off;*
xiv. *Site Drainage;*
xv. *Site Signage;*
xvi. *Ancillary Forestry Felling to facilitate construction and operation of the proposed development; and*
xvii. *All associated site development works.*

This application is seeking a ten-year permission and 35 year operational life from the date of commissioning of the renewable energy development.As construction is completed, elements of the project that have been developed as a temporary facilitator will either be removed, restored to its original condition or will naturally revegetate. These include temporary construction compounds, the borrow pit and the peat repository area. These infrastrucral elements are, therefore nort included in this decommissioning plan.

All access roads and hardstanding areas forming part of a site roadway network will be left in situ for future use by landowners and for ongoing forestry operations. It is intended that all above ground components and underground cabling (ducting left in-situ) will be removed from the site as part of the decommissioning of the Proposed Development. The following elements are included in the decommissioning phase:

- Wind turbines dismantling and removal off site;
- Underground cabling removal (ducting left in-situ);&
- Turbine foundation backfilling following disdmantling and removal of wind turbines (any excavated material, will be re-instated / foundations that protrude above ground level will be backfilled with soil -underground reinforced concrete remaining in-situ)
- Transport Route Accommodation Works.

## 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 environmental issues and this is enhanced by the works proposals as part of decommissioning.

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 Environmental Impact Assessment Report (EIAR) and associated planning documentation.
- 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.

- 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.
- 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 main contractor will be appointed to undertake the decommissioning of the Proposed Development. The main contractors will comply with the Decommissioning Plan (DP) prepared for the decommissioning 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.
- Underground Cabling.
- Transport Route Accommodation Works.

#### 2.4.2.1 Wind Turbines

Prior to any works being undertaken on wind turbines, they will be disconnected from the grid by the 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. Turbine dismantling will be undertaken in reverse order to methodology employed during their construction. Cranes will be brought back to site utilising the hard stand areas ~~that will be present after the construction phase.~~ 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 turbines will be removed from site 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 site are assessed in Chapter 14 of the EIAR, which accompanies this application.

The transport of disassembled turbines from the site 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.

#### 2.4.2.2 Turbine Foundations

On the dismantling of turbines, it is not intended to remove the concrete foundation from the ground. It is considered that its removal will be the least preferred options in terms of potential effects on the environment. Therefore, the 15 no. turbine foundations will be backfilled and covered, following the dismantling and removal of the wind turbines, with soil material.. The very small volumes of soil material will be sourced locally and imported to site on heavy good vehicles (HGVs). The imported soil 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.

#### 2.4.2.3 Underground Cabling

The 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. This will be undertaken at each of the joint bays/pull pits along the cable. The ground above original pulling pits/joint bays 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 for an underground element that is not visible with no environmental impact associated with leaving the ducting in-situ.

The onsite substation will remain in place as it will be under the ownership of the ESB and will form a permanent part of the national electricity grid.

#### 2.4.2.4 Transport Route Accommodation Works

During the construction of the Proposed Development, a number of road and junction improvements and temporary works will be completed to provide access to the site during turbine component delivery (refer to Chapter 14 of the EIAR). All these accommodation areas will be re-used during decommissioning and turbine component removal. The proposed link roads between the R240 and the L1731 and along the L1731 itself will be left in -situ, as will the acoomodation works areas along the L1731 local road and the local access road leading to the site entrance.

# 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.

## 3.1 Site Drainage

The site drainage features for this site during its construction and operation are outlined in the EIAR and drainage plan which accompany this application. When the final Decomissioning 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, as required.

## 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 site:

- Road-going vehicles will be refuelled off site wherever possible.
- On-site refuelling will be carried out at designated refuelling areas at various locations throughout the site. Machinery will be refuelled directly by a fuel truck that will come to site as required
- 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.
- Fuel volumes stored on site will be minimised. Fuel storage areas will be bunded appropriately.
- The plant used will be regularly inspected for leaks and fitness for purpose; and,
- An emergency plan for the decommissioning phase to deal with accidental spillages will be developed (Refer to Section 4 below). Spill kits will be available to deal with an accidental spillage in and outside the refuelling area.
- A programme for the regular inspection of plant and equipment for leaks and fitness for purpose will be developed at the outset of the decommissioning phase.

## 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.

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

- Any site roads with the potential to give rise to dust will be regularly watered, as appropriate, during dry and/or windy conditions;
- The designated public roads outside the site and along the main transport routes to the site will be regularly inspected by the ECoW for cleanliness, and cleaned as necessary;
- Material handling systems and material storage areas will be designed and laid out to minimise exposure to wind;
- Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods;
- Water misting or bowsers will operate on-site as required to mitigate dust in dry weather conditions;
- The transport of soils or other material, which has significant potential to generate dust, will be undertaken in tarpaulin-covered vehicles where necessary;
- All construction related traffic will have speed restrictions on un-surfaced roads to 15 kph;
- Daily inspection of construction sites to examine dust measures and their effectiveness.
- When necessary, sections of the haul route will be swept using a truck mounted vacuum sweeper; and,
- All vehicles leaving the construction areas of the site will pass through a wheel washing area prior to entering the local road network.

## 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. 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-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 will 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 Site Manager to drivers to ensure smooth machinery operation/driving, and to minimise unnecessary noise generation; and,

## 3.5 Invasive Species Management

Any soil material that will be imported to site 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 wind farm site (including along the grid connection cable route and transport route) to identify invasive species where any minor excavation will be required. If present in these areas, the ecologist will propose suitable management measures.

## 3.6 Traffic Management

A Traffic Management Plan will be prepared in advance of any decommissioning works. The removal of turbines from site will be undertaken by 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 Donegal County Council.

The Traffic Management Plan for the decommissioning phase will also include provision for the removal of underground cables from the underground ducts. This will be done by opening the joint bays along the public road .

## 3.7 Waste Management

This section of the Decommissioning Plan provides a waste management plan (WMP) which outlines the best practice procedures during the decommissioning of the Proposed Development. The WMP 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 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 has to have all necessary licenses and authorisations. It will be the duty of the Waste Manager on the site of the Glenard Wind Farm development to ensure that all contractors hired to remove waste from the site 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 decomissiong phase, will be 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). It is important to emphasise that no demolition will take place at this site, however, this document was referred to throughout the process of completing this WMP.

### 3.7.2 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 WMP 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 several established markets available for the beneficial use of Construction and Demolition waste such as, for example,using waste concrete as fill for new roads.

At all times during the implementation of the WMP, 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 site 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 Development 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 wind farm materials can be reused several times before they have 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 onsite, 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 Glenard Wind Farm development is low which provides the justification for adopting this method of waste management.

### 3.7.3.3 Implementation

#### 3.7.3.3.1 *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 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 on site during the decommissioning phase of the project 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 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.

#### 3.7.3.3.3 *Record Keeping*

The WMP will provide systems that will enable all arisings, movements and treatments of decommissioning waste 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 WMP 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)
- 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
- Site Address of Destination Facility

### 3.7.3.4 Waste Management Plan Conclusion

The WMP will be properly adhered to by all staff involved in the project and will be outlined within the induction process for all site personnel. The waste hierarchy will be employed when designing the

plan to ensure that the least possible amount of waste is produced during decommissioning. Reuse of certain types of construction wastes will cut down on the cost and requirement of raw materials therefore further minimising waste levels.

This WMP has been prepared to outline the main objectives that are to be adhered to.

## 3.8 Environmental Management Implementation

### 3.8.1 Roles and Responsbilities

A Contractor will be appointed to undertake the decommissioning activities. The Site Manager and/or Environmental Clerk of Works (ECoW) will be key members of the Contractors team and are the points of contact relating to decommissioning-related environmental issues.

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

The Site Manager in consultation with the ECoW will be responsible for employing the services of a suitably qualified ecologist and any other suitably qualified professionals (e.g. geotechnical engineer, hydrologist etc.) as required throughout the decommissioning works.

# 4. 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.

## 4.1 Emergency Response Procedure

The site ERP includes details 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/PSCS 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.

### 4.1.1 Roles and Responsibilities

The chain of command during an emergency response sets out who is responsible for coordinating the response. The Site Supervisor/Construction Manager will lead the emergency response which makes him 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 4-1. In a situation where the Site Supervisor/ Construction 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 4-1. This will be updated throughout the the project.

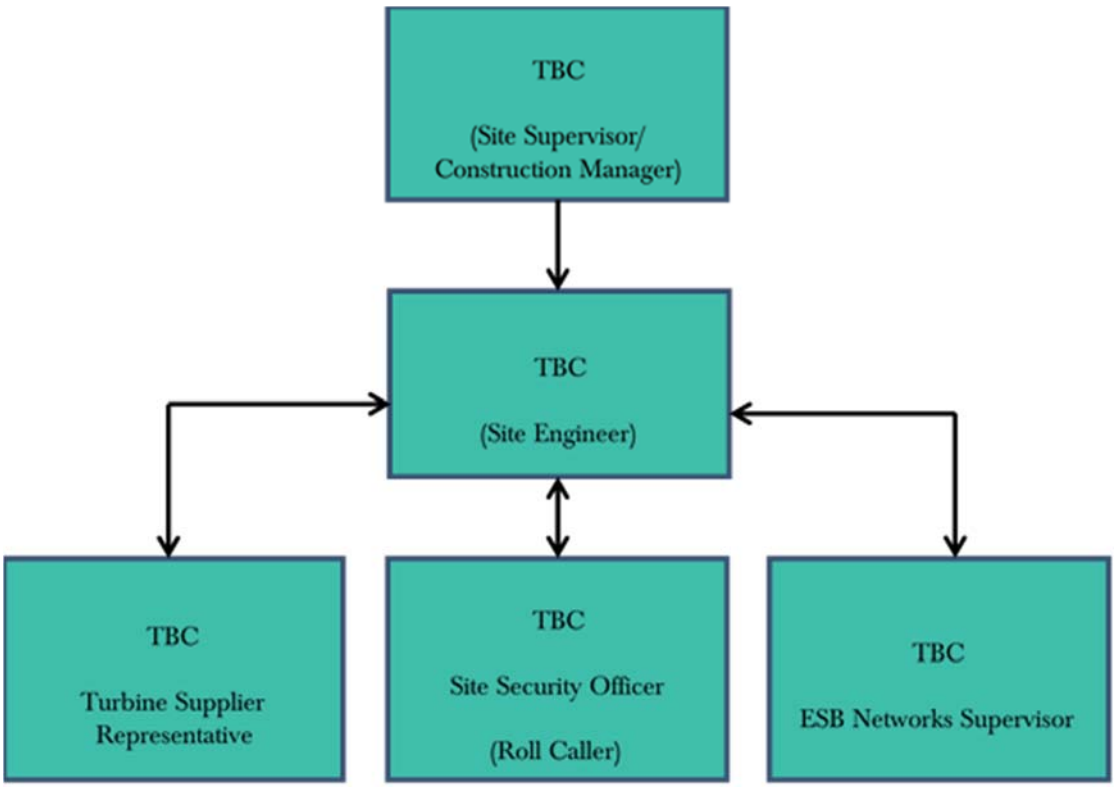


*Figure 4-1 Emergency Response Procedure Chain of Command*

### 4.1.2 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 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. |
| 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 Table 4-2 the Site Supervisor/Construction 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 on the site. The Site Supervisor/Construction 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/Construction Manager will be required to use their own discretion at that point. In the case of fire, the emergency evacuation of the site should proceed, without exception. The 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 as provided in Section 4.3.
- Contact the next of kin of any injured personnel where appropriate.

### 4.1.3 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 within the site will be designated 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/Construction Manager when all personnel have been accounted for. The 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 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 project. 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 that will 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 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 ECoW immediately giving information on the location, type and extent of the spill so that they can take appropriate action.
- The ECoW 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.
- The ECoW will notify the appropriate regulatory body such as the local authority, and the Environmental Protection Agency (EPA), if deemed necessary.

Environmental incidents are not limited to just fuel spillages. Therefore, any environmental incident will be investigated in accordance with the following steps.

- The ECoW must be immediately notified.
- If necessary, the ECoW 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.
- If the incident has impacted on a sensitive receptor such as an archaeological feature the ECoW will liaise with the Project Archaeologist.
- A record of all environmental incidents will be kept on file by the ECoW and the Main Contractor. These records will be made available to the relevant authorities such as the local authority and EPA, if required.

The ECoW 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 should 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.

Due to the remoteness of the site it may be necessary to liaise with 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 will form part of the site induction to make new personnel and sub-contractors aware of any such arrangement or requirement if applicable. A list of emergency contacts for the construction phase is presented in Table 4-2. This list will be updated as necessary ahead of the decommissioning phase.

*Figure 4-2 Emergency Contacts*

| Contact | Telephone no. |
|---|---|
| Emergency Services – Ambulance, Fire, Gardaí | 999/112 |
| Doctor – Buncrana Medical Centre | 074 93 6311 |
| Hospital – Letterkenny University Hospital | 074 912 5888 |
| ESB Emergency Services | 1850 372 999 |
| Gas Networks Ireland Emergency | 1850 20 50 50 |
| Gardaí – Buncrana Garda Station. | 074 932 0540 |

| | |
|---|---|
| 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 Construction Stage (PSCS): TBC | TBC |
| Project Supervisor Design Stage (PSDS): TBC | TBC |
| FuturEnergy Glenard Desiganted Acvitiy Company (DAC) | 081 8776301 |

## 4.3 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 involved 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.

## 4.4 Induction Checklist

Table 4-3 provides a list of items highlighted in this ERP which will 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 project.

*Table 4-3 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 | |
| Due to the remoteness of the site 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 will 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. | |

# 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 site.

At this time, it is not possible to determine when exactly decommissioning will take place, however, it will be 35-years after the comissionioning of the Proposed Development.

The phasing and scheduling of the main decommissioning task items are outlined in Figure 5-1 below, where the 1st 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 & Safety | | | | | | | | | | | |
| 2 | Turbine Decommissioning | Disconnect power output | | | | | | | | | | |
| 3 | Turbine Dismantling | Disassemble 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 by covering with soil material | | | | | | | | | | |
| 7 | Accomodation Areas Reinstatement | Reinstate soil berm and boundary treatments | | | | | | | | | | |

*Figure 5-1 Indicative Decommissioning Schedule*

# 6. MITIGATION PROPOSALS

All mitigation measures relating to decommissioining of the Proposed Development were set out in the various sections of the Environmental Impact Assessment Report (EIAR) and NIS prepared as part of the planning permission application to An Bord Pleanála.

This section of the Decommissioning Plan (DP) groups together all of the mitigation measures presented in the above documents. The Mitigation Measures are presented in the following pages.

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 project.

*Table 6-1 Mitigation Measures*

| Ref. No. | Reference Location | Mitigation Measure | Audit Result | Action Required |
|---|---|---|---|---|
| | | ***Decommissioning Phase*** | | |
| MM1 | EIAR Chapter 4 | Prior to the end of the operational period the Decommissioning Plan (Appendix 4-6 of the EIAR) will be updated in line with decommissioning methodologies that may exist at the time and will agreed with the competent authority at that time. | | |
| MM2 | DP Section 3 | Prior to decommissioning, a suitably qualified ecologist will complete an invasive species survey of the material proposed for turbine foundation backfilling. The invasive species survey will also be undertaken along the cable route to identify invasive species at joint bay locations where excavation to expose the cabling for removal will be required. | | |
| MM3 | EIAR Chapter 4<br><br>DP Section 2 | On removal of turbines, the covering of the foundation will be completed using locally sourced material imported to site as the required quantity of material does not currently exist at the site. The imported soil 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. | | |
| MM4 | EIAR Chapter 4<br><br>DP Section 3 | The following mitigation measures are proposed to avoid release of hydrocarbons at the site:<br>› Road-going vehicles will be refuelled off site wherever possible;<br>› On-site refuelling will be carried out at designated refuelling areas at various locations throughout the site. Machinery will be refuelled directly by a fuel truck that will come to site as required<br>› Only designated trained and competent operatives will be authorised to refuel plant on site. | | |

| Ref. No. | Reference Location | Mitigation Measure | Audit Result | Action Required |
|---|---|---|---|---|
| | | › Fuel volumes stored on site should be minimised. Any fuel storage areas will be bunded appropriately;<br>› The plant used will be regularly inspected for leaks and fitness for purpose; and,<br>› An emergency plan for the decommissioning phase to deal with accidental spillages will be developed (refer to EIAR Section 4). Spill kits will be available to deal with and accidental spillage in and outside the refuelling area.<br><br>A programme for the regular inspection of plant and equipment for leaks and fitness for purpose will be developed at the outset of the decommissioning phase. | | |
| MM5 | EIAR Section 7 | The following measures are proposed for the decommissioning phase:<br>› During the decommissioning phase, disturbance limitation measures will be as per the construction phase (see Chapter 7 of the EIAR).<br>› Plant machinery will be turned off when not in use.<br>› All plant and equipment for use will comply with the Construction Plant and the European Communities (Noise Emission by Equipment for Use Outdoors) Regulations 2001 (S.I. No. 632 of 2001).<br><br>A project ecologist will be appointed to oversee the decommissioning phase, with similar duties to those outlined above during the construction phase. | | |
| MM6 | EIAR Chapter 14<br><br>DP Section 3 | A Traffic Management Plan will be prepared in advance of any decommissioning works. The removal of turbines from site will be undertaken by 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 Donegal County Council. | | |

| Ref. No. | Reference Location | Mitigation Measure | Audit Result | Action Required |
|---|---|---|---|---|
| | | The Traffic Management Plan for the decommissioning phase will also include provision for the removal of underground cables from the underground ducts. This will be done by opening the joint bays in along the public road . | | |

# 7. COMPLIANCE AND REVIEW

## 7.1 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 Site Supervisor/Construction 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.

## 7.2 Auditing

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 ECoW on behalf of the appointed contractor. It is important that an impartial and objective approach is adopted. 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 the contractor .

An audit of compliance with the decommissioning mitigation measures will be completed by the ECoW during the decommissioning phase of the development.. The findings of each audit will be documented by the ECoW in an audit report within the Decommissioning Plan for the site. The audit report will be made available to the local authority on request.

## 7.3 Environmental Compliance

The following definitions shall apply in relation to the classification of Environmental Occurrences during decommissioning of the proposed wind farm development:

**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 boundary.

**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.

## 7.4 Corrective Action Procedure

A corrective action is implemented to rectify an environmental problem on-site. Corrective actions will be implemented by the Site Supervisor/Construction 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/Construction Manager and the ECoW 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.

## 7.5 Decommissioning Plan Review

This Decommissioning Plan will be reviewed and updated prior to commencement of decommissioning works. It will be agreed with the Planning Authority prior to the commencement of decomissioniong. Further updates will be completed to the plan during decommissioning works to adapt to specific situations or site conditions that are encountered that need to be considered by the plan.