APPENDIX 4-3

Decommissioning Plan

Planning and Environmental Consultants

Decommissioning Plan

Taurbeg Wind Farm Extension of Operational Life

DOCUMENT DETAILS

Client:	**Taurbeg Ltd**
Project Title:	**Taurbeg Wind Farm Extension of Operational Life**
Project Number:	**231030**
Document Title:	**Decommissioning Plan**
Document File Name:	**Appendix 4-3 Decommissioning Plan – F – 2025.06.29 - 231030**
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Planning and Environmental Consultants

Rev	Status	Date	Author(s)	Approved By
01	Draft	22.03.2024	NS	EM
04	Final	29.06.2025	NS	EM

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1. INTRODUCTION

This Decommissioning Plan has been prepared by MKO on behalf of Taurbeg Ltd. (the Applicant) for the decommissioning of the existing Taurbeg Wind Farm and associated infrastructure at the conclusion of its operational life in 2036. This document will also inform the methodology for the decommissioning of the existing Taurbeg Wind Farm and all associated infrastructure should the wind farm be decommissioned in 2026. This document has been prepared as part of an Environmental Impact Assessment Report (EIAR) and planning application to Cork County Council for the extension of the operational life of the existing Taurbeg Wind Farm (Cork County Council Ref N/2002/3608) for a further period of 10 years beyond the expiry of its current permission in 2026 (the "Proposed Lifetime Extension"). Under the Proposed Lifetime Extension, decommissioning of the existing wind farm is instead intended to take place after the proposed additional 10-year period (in 2036), subject to planning permission.

Decommissioning activities have evolved since the original planning application was submitted and this Decommissioning Plan has been prepared to account for such updates. This Decommissioning Plan is based upon current technologies, methods and best practice.

Prior to decommissioning, the applicant will engage with the Planning Authority to agree a specific Decommissioning Plan to ensure the appropriate decommissioning and reinstatement of the site having regard to prevailing environmental conditions and to ensure the use of best available recycling technology and techniques available at the time. This document should, therefore, be considered to be a 'live' document which will be further developed by the appointed decommissioning contractor who will prepare and insert detailed method statements relative to each individual work stream.

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

1.1 Scope of the Decommissioning Plan

This report is presented as a guidance document for the decommissioning of the existing Taurbeg Wind Farm. Where the term 'the Site' is used in the Decommissioning Plan, it refers to the primary study area for the EIAR, as delineated by the EIAR Site Boundary. 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.

This report is divided into six sections, as outlined below:

- **Section 1** provides a brief introduction as to the scope of the report.
- **Section 2** outlines the Site and existing Taurbeg Wind Farm, 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 and 5** 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 6** sets out a programme for the timing of the works.
- **Section 7 and 8** outline mitigation and monitoring proposals for the decommissioning phase.

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

2. SITE AND PROJECT DETAILS

2.1 Site Location and Description

The existing Taurbeg Wind Farm is located 3.5km south of Rockchapel and 10.5km northwest of Newmarket, Co. Cork, in the townlands of Taurbeg, Glasheenanargid, and Taurmore. The land uses surrounding the existing Taurbeg Wind Farm include peat bogs, agricultural pastures, coniferous forestry and transitional woodland scrub. The approximate grid reference location for the centre of the site is E122541, N111778.

The existing Taurbeg Wind Farm comprises 11 no. Bonus (now Siemens) SWT -2.3-82 turbines, each with a rated output of 2.3 Megawatts, and an overall tip height of 108.2m. The existing Taurbeg Wind Farm, which was commissioned in March 2006, has a total rated capacity of 25.3 megawatts (MW). The wind farm is connected to the National Grid at the existing Glenlara 110kV Substation.

No construction activities or alterations to the existing wind farm are proposed beyond routine maintenance of the turbines and electrical infrastructure during the extended operational phase of the existing Taurbeg Wind Farm.

2.2 Description of the Existing Taurbeg Wind Farm

Planning permission is being sought for the Proposed Lifetime Extension of Taurbeg Wind Farm as permitted by Cork County Council under planning regulation ref N/2002/3608, for a further period of 10 years from the date of expiry (2026 per Condition no. 7 of the original planning consent issued), with decommissioning of the wind farm at the end of the proposed extension period.

The Proposed Lifetime Extension comprises:

i. 11 no. existing wind turbines with a tip height of 108.2 metres and all associated foundations and hardstanding areas;
ii. 1 no. existing onsite 38kV electrical substation including a control building, associated electrical plant and equipment, welfare facilities and a wastewater holding tank;
iii. 1 no. existing meteorological mast with a height of 67m;
iv. All existing underground electrical and communications cabling connecting the existing wind turbines to the existing onsite 38kV Substation;
v. An existing gated site entrance and existing internal access tracks;
vi. Existing site drainage;
vii. Existing ancillary infrastructure, associated site fencing and signage.

All elements of the wind farm are pre-existing and it is not proposed to make any alterations to the current site layout, wind turbines or associated infrastructure as part of this application.

Taurbeg Wind Farm is connected to the national electricity grid via the existing Glenlara 110kV Substation. The grid connection was subject to a separate planning application (Pl. Reg. Ref: N/2001/6549). It is not included in the current planning application, however, it has been assessed cumulatively with the rest of the wind farm infrastructure, as part of the EIAR.

The planning history of the existing Taurbeg Wind Farm is further detailed in the accompanying EIAR Chapter 2: Background to the Proposed Project.

The site layout showing the existing infrastructure of the Taurbeg Wind Farm is shown in Figure 2-1. It is proposed to leave the turbine foundations in place underground and to cover them with earth and reseed as appropriate. Leaving the turbine foundations in-situ is considered a more environmentally

prudent option, as to remove that volume of reinforced concrete from the ground could result in significant environmental nuisance such as noise, dust and/or vibration.

It is proposed to leave access roads in-situ, as these are in use by the participating landowners to access their lands and as existing walking trails. If it were to be confirmed that the roads were not required in the future for any other useful purpose, they could be removed where required, however, this is not envisaged at this time. It is proposed to leave underground cable ducting in place where they are below a level likely to be impacted by typical agricultural works.

It is intended that decommissioning will remove the existing turbines and reinstate areas where infrastructure is removed. The following elements are included:

- Wind turbines dismantling and removal off site;
- Internal electrical cabling removal (ducting remaining), and
- Turbine foundation backfilling (underground reinforced concrete remaining in-situ).

Map Legend

- Taurbeg EIAR Site Boundary
- Existing Turbines
- Existing Site Roads
- Turbine Foundation and Hardstand
- Existing Onsite Substation
- Existing Met Mast

Drawing Title
Proposed Lifetime Extension Layout Map

Project Title
Taurbeg Wind Farm Extension of Operational Life

Drawn By	Checked By
MC	EMC
Project No. 231030	Drawing No. Figure 2-1
Scale 1:6,000	Date 2025-01-27

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2.3 Targets and Objectives

The decommissioning phase works will be completed to approved standards, which include specified materials, standards, specifications and codes of practice. The Decommissioning Plan has considered environmental aspects, and this is enhanced by the works proposed 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 minimal impact/disturbance to local landowners and the local community;
- Ensure decommissioning works and activities have minimal 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. spoil and overburden material for backfilling and reinstatement;
- Ensure sustainable sources for materials supply where possible;
- Avoidance of any pollution incident or near miss and having emergency measures in place;
- Avoidance of vandalism;
- Keeping all drainage channels free from obstruction and debris;
- Correct implementation of decommissioning works to a minimum on the local environment, watercourses, and wildlife.
- 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. Decommissioning methods will be altered where it is found there is the potential to have an adverse effect 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 existing Taurbeg Wind Farm. The main contractors will comply with the Operational Stage Environmental Management Plan (OEMP) implemented during operation and any revisions made to those documents as they develop throughout the continued operation of the wind farm. An overview of the anticipated decommissioning methodologies is provided below.

2.4.2 Decommissioning Methodology

It is proposed to leave the turbine foundations in place underground and to cover them with earth and reseed as appropriate. Leaving the turbine foundations in-situ is considered a more environmentally prudent option, as to remove that volume of reinforced concrete from the ground could result in significant environmental nuisance such as noise, dust and/or vibration.

It is proposed to leave access roads in-situ, as these are in use by the participating landowners to access their lands and as existing walking trails. If it were to be confirmed that the roads were not required in the future for any other useful purpose, they could be removed where required, however, this is not envisaged at this time. It is proposed to leave underground cable ducting in place where they are below a level likely to be impacted by typical agricultural works.

It is intended that decommissioning will remove the existing turbines and reinstate areas where infrastructure is removed. The following elements are included:

- Wind turbines dismantling and removal off site;
- Internal electrical cabling removal (ducting remaining), and
- Turbine foundation backfilling (underground reinforced concrete remaining in-situ).

The proposed anticipated decommissioning methodology is summarised under the following main headings:

- Wind turbines;
- Turbine Hardstands;
- Transformers and Electrical Cabling;
- Electrical Control Building.

2.4.2.1 General Principles

Unlike most other forms of development, decommissioning of wind farms is typically a straightforward process. Infrastructure can readily be dismantled on site and removed. Following the restoration of the site, there would be no significant visible evidence of prior existence, and no legacy of pollution.

The decommissioning of the Taurbeg Wind Farm is not expected to pose significant risks to the environment; nevertheless, effects need to be assessed in order to ensure that no, or minimal, impact on the environment occurs.

All measures described within the Environmental Impact Assessment Report (EIAR) with regards to mitigation and protection for ecological receptors, waste management, surface water management and prevention of pollution will apply to decommissioning works; subject to review of relevant regulations and best practice at that time.

In general, all structures above ground level shall be dismantled and removed from the site for reuse or recycling where possible, however, access tracks can be retained for use by landowners to access their lands where required. It is likely that, in order to minimise environmental disturbance, the majority of sub-surface elements of the wind farm shall remain in-situ.

The overriding principle of the decommissioning process is to minimise the extent of any ground disturbance on site. While groundworks are an inevitable consequence of the decommissioning process, they shall only be undertaken where absolutely necessary.

The following sections detail the methodologies likely to be implemented during decommissioning; however, as described above, a site-specific approach will be agreed with the Planning Authority.

2.4.2.2 Wind Turbines

Prior to any decommissioning works being undertaken, a comprehensive health and safety assessment will be carried out. In advance of works to the turbines, they will be disconnected from the onsite electrical network by an appointed electrical contractor. Turbine dismantling will be undertaken in reverse order to the methodology employed during their construction. Cranes will be brought to site and will utilise the existing crane hardstandings.

Wind turbines are comprised of the tower, nacelle and blades which are modular items that can be disassembled. If the turbines are to be sold on or reused elsewhere, they shall be removed from the site by specialist vehicles similar to those used during their transportation to site.

If the wind turbine components are not to be reused then they shall be recycled where possible. The tower sections and nacelle are inert steel/ferrous metal structures which are readily recyclable. These will be sent to a licenced waste facility for recycling.

The following elements are located in the nacelle: hub and couplings, shaft, main bearings, multiplier, generator and orientation system.

- Hub: This is a blade joint element and mechanical transmission. It is coupled to the low speed shaft of the wind turbine through which the rotational movement generated by the wind force is transmitted. The material is machined steel, so its final destination is recycled as steel scrap.
- Slow shaft: connects the rotor hub to the gearbox. It is made entirely of steel, so its final destination will be recycling as scrap.
- Multiplier: is a mechanical element which connects to the slow shaft and transforms the rotational speed of the mechanical transmission. Like the shaft, the gearbox is made of steel, and houses components of the cooling and lubrication system such as valves, oil lines and filters. Once dismantled, if it is in good condition, it can be used as a spare part for other wind turbines. If it is unusable, the smaller parts will be dismantled and sent for recycling as scrap.
- Prior to dismantling, all the oil will be removed in a controlled manner by a suitably licensed organisation, as well as the pipes and filters. Both oils and filters will be recycled through an authorized manager, by means of energy valuation processes.
- Generator: this is a turbine element which converts mechanical energy into electrical energy. It consists of an outer casing and an inner steel support. Inside this structure is a winding of copper wiring. Both the steel and the copper can be recycled as scrap.
- Electrical and control components: Most of the installed cables are made of copper, although there are also cables with aluminum. The outer insulation in most cases is made of PVC, polyethylene or other polymers. Practically all of the wiring is recoverable for the reuse of metals, of which copper and aluminum are the main interest, due to their high market value.

The tower is a tubular metallic structure that supports the nacelle and rotor assembly. They are manufactured from galvanized steel plates and both the inside and outside are coated with several layers of paint to protect them against corrosion. It is proposed to recycle its elements as scrap, as long as it is not destined to other uses.

The turbine blades are constructed of fiberglass. Due to the large number of turbine blades currently being decommissioned globally, extensive research is being undertaken to find an alternative use for the fibreglass. There are a number of emerging innovations for fibreglass recycling including the re-purposing of fibreglass for other civil engineering projects (e.g. as a component in concrete production, roofs for social housing and incorporation to the construction of electrical powerline masts/structures.)

The Applicant has made a commitment not to send turbine blades to a landfill or incineration facility. Instead, they will be stored until an alternative solution is found. The exact approach for recycling the

turbines has yet to be determined, however recycling will be carried out in accordance with best practice at the time of decommissioning in 2036.

Having been dismantled, the turbine blades will be processed on the crane hardstanding to accommodate their removal by standard HGVs. This process is likely to avoid the requirement for abnormal-sized loads, or oversized vehicles, to utilise the local road network.

2.4.2.3 Turbine Hardstands

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 having potential effects on the environment. Therefore, the turbine foundations will be backfilled and left to naturally revegetate. If there is usable soil or overburden material on the site, this material will be used. Alternatively, where material is not readily available on site, soil will be sourced locally and imported to site on heavy goods vehicles (HGVs). This will be done utilising the lowest number of deliveries possible. 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 and accelerate the resumption of the natural drainage management that will have existed prior to any construction. Hardstands will be allowed to regenerate and revegetate naturally.

2.4.2.4 Transformers & Internal Electrical Cabling

The decommissioning of transformers will depend entirely on any future use of the wind turbine. If the turbine is to be used elsewhere, the transformer will be removed from site for refurbishment and future use. If the transformer is to be recycled, it will be removed to an appropriate waste handling/recycling facility and stripped of any usable parts with the remainder being recycled.

Internal electrical cables contain a core of copper or aluminium which can be recycled or re-melted. Where required cables shall be pulled from the existing ducting and removed to an approved waste handling facility where the cores shall be recycled or re-melted and the remaining material shall be disposed of at an appropriate facility.

3. ENVIRONMENTAL MANAGEMENT

The following sections give an overview of the drainage design, 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 the existing Taurbeg Wind Farm during its continued operation are outlined in Chapter 9: Hydrology and Hydrogeology of this EIAR. As this Decommissioning Plan is a working document and is presented as an appendix to the EIAR, the drainage measures are not included in this document. When the final Decommissioning Plan is prepared prior to decommissioning and presented as a standalone document, all drainage measures will be included in that document as required. The drainage proposals will be developed prior to the commencement of decommissioning if deemed necessary. It is not anticipated that the decommissioning phase of the Taurbeg Wind Farm will interrupt the existing drainage regime in any way with the works proposed.

3.2 Refuelling, Fuel and Hazardous Materials Storage and General Pollution Prevention Measures

Pollution prevention methods will be undertaken in accordance with those measures set out in the EIAR and prevailing best practice procedures. Any material or substance which could cause pollution, including fuels/oils or silty water will be prevented from entering groundwater, surface water drains or surface waters by the appropriate use of, and appropriate placement of, temporary cut-off drains and silt traps. Any sign of ineffective water treatment measures or evidence of silted or contaminated water entering surface water on-site, will be reported immediately to the contractor.

As noted in the '*Decommissioning of Onshore Wind Turbines'* as published by Wind Europe in 2020, the EU Waste Framework Directive (2008/98/EC) states that waste oils must be collected separately (where it is technically feasible) and treated in accordance with the waste hierarchy and without any harm to human health and the environment. Where feasible, waste oils of different characteristics should not be mixed to enable treatment.

Plant and equipment use during decommissioning works 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 are proposed to avoid release of hydrocarbons on the site:

- Road-going vehicles will be refuelled off-site wherever possible;
- Where offsite refuelling is not possible, refuelling will be carried out in a designated area over an impermeable surface (hardstanding/protective layer/trays) at least 50m from surface waters/surface water drains. Machinery will be refuelled directly by a fuel truck that will come to site as required;
- Irrespective of the buffer distance and location of refuelling, interceptor drip trays will be available in accordance with standard good practice. Interceptor drip trays will be positioned under any stationary mobile plant to prevent oil contamination of the ground surface or water;
- 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 pipes on plant outlets at fuel tanks etc. will be regularly checked and maintained to ensure that no drips or leaks to ground occur;

- Fuel volumes stored on site will be minimised. Any areas of waste oil/fuel/chemical storage and refuelling will be located 50m away from surface waters or drainage paths. Such storage areas will be appropriately sited and bunded to prevent the downward percolation of contaminants to natural soils and groundwater. Fuel, oils and chemicals will be stored on an impervious base within a bund able to contain at least 110% of the volume stored. Rainwater will not be allowed to accumulate within the bund and in any way compromise the required 110% volume capacity. No tanks or containers may be perforated or dismantled on-site. A competent operator shall empty all contents and residues for safe disposal off-site in accordance with current waste regulations;
- No burning of any materials shall be permitted;
- The use of herbicide shall also be prohibited;
- Plant and site vehicles are to be well maintained and any vehicles leaking fluids must be repaired or removed from site immediately. Any servicing operations shall take place over drip trays;
- An emergency plan for the decommissioning phase to deal with accidental spillages will be developed (refer to Section 5.1.4). Spill kits will be available to deal with and accidental spillage in and outside the refuelling area, and,
- 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 backfilling 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 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 Site Manager 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;
- The transport of soils or other material where necessary, which has significant potential to generate dust, will be undertaken in tarpaulin-covered vehicles;
- All site related traffic will have speed restrictions on un-surfaced roads to 15 kph;
- Daily inspection of the site to examine dust measures and their effectiveness, and,
- When necessary, sections of the haul route will be swept using a truck mounted vacuum sweeper.

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 best practice mitigation measures to control noise include:

- Limiting the hours during which site activities likely to create noticeable levels of noise or vibration are permitted;
- Establishing channels of communication between the Applicant or contractor, Local Authorities and local residents;
- Selection of plant with low inherent potential for generation of noise and/or vibration;
- No plant or machinery will be permitted to cause a public nuisance due to noise;
- The best means practicable, including proper maintenance of plant, will be employed to minimise the noise produced by on site operations;
- All vehicles and mechanical plant will be fitted with effective exhaust silencers and maintained in good working order for the duration of works;
- Compressors models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic tools shall be fitted with suitable silencers;
- Machinery that is used intermittently will be shut down or throttled back to a minimum during periods when not in use, and,
- The hours of decommissioning works (and associated traffic movements) will, insofar as possible, be limited to avoid unsociable hours. Activities shall generally be restricted to between 07:00hrs and 19:00hrs Monday to Friday and between 07:00hrs and 13:00hrs on Saturdays, with no activities on Sundays or public holidays unless in the event of an emergency. However, to ensure that optimal use is made of good weather period or at critical periods within the programme (e.g., crane use) or to accommodate removal of large turbine component along public routes it could be necessary on occasion to work outside of these hours. Any such out of hours working will be notified in advance to the Local Authority and local residents by the project Community Liaison Officer.

3.5 Ground Disturbance, Material Excavation & Reinstatement

During decommissioning, all plant and machinery will keep to existing infrastructure (e.g. tracks and hardstanding) and will not encroach upon adjacent habitats unless this is essential in order to progress the decommissioning works. In the event of any necessary encroachment into adjoining habitats; appropriate trackway or matting shall be placed to avoid any loss of the adjoining habitat.

The reinstatement of any areas disturbed during the decommissioning works will be undertaken. The contractor will record excavated volumes and storage areas, and volumes and type of material utilised for reinstatement of relevant areas. This information will be updated for the duration of the decommissioning works.

Reinstatement (i.e. backfilling of the turbine foundations) will be carried out using site-won materials, if possible, without compromising or damaging established/existing habitats. Natural regeneration and revegetation will be allowed to occur on the existing hardstands and roadways that are not being maintained for local landowner access. However, native seed mixes may also be selected to complement surrounding species. The seed mix and method of application will be agreed with a suitably qualified ecologist to ensure that the reinstated habitats are compatible with those existing and surrounding the reinstated areas at the time of decommissioning.

All temporarily stockpiled materials will be stored in designated areas and isolated from any surface water drains. The River Feale is the only surface watercourse within the EIAR Site Boundary. Aggregate or fine materials storage will be enclosed and screened/sheeted. No storage of materials within sensitive habitats will be permitted.

Soil and vegetation must be stored separately from subsoil and shall be retained and reinstated on all areas of stripped ground as soon as possible to prevent erosion and leaching/loss of nutrients.

Excavated turves; particularly in the case of wet heath, shall be appropriately stored to protect the plant species; shall be reinstated with the vegetated side facing upwards, in order to speed up the re-generation process, minimise the need for re-seeding, and help maintain the original species mix.

3.6 Invasive Species Management

Any soil material that will be imported to site as part of the foundation backfilling 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 this sourcing suitably clean 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.

3.7 Biodiversity

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

- All measures to mitigate the risks of contamination of watercourses as highlighted in Chapters 6 & 9 will be fully implemented.
- The areas within 50m of the hard-stand and turbine foundations will be subject to a pre-works terrestrial ecology walkover to highlight any constraints that may be present (e.g. breeding or resting places of protected species, presence of Invasive Plant Species).
- If any significant constraints are identified appropriate controls will be developed and integrated into the live decommissioning plan ahead of the commencement of the work.
- If any Third Schedule Invasive species are present in or adjacent to the works footprint, an Invasive Species Management Plan (ISMP) will be developed, and all recommendations implemented in accordance with the contemporary best practice measures.
- Speed limits will be enforced on internal roads.
- All edible wastes will be stored in covered segregated containers and disposed of at licensed facilities.
- No refuelling or other hydrocarbon related usage will be undertaken within 50m of any watercourse in relation to maintenance vehicles, plant or machinery.
- Any import of soil or fill necessary in the decommissioning process shall be from approved sources and appropriately tested or inspected to minimise the risk of import of invasive species. Only soil appropriate to the site (pH, soil type) will be used. The re-seeding or natural revegetation of reinstated areas will proceed on the advice of a suitably qualified ecologist. Any seed mix used will be on the approval of the ecologist.

3.8 Ornithology

Regarding Ornithology and Avian Populations, the decommissioning plan will include industry best practice measures to mitigate the impact of works on a bird, which may include the following:

- No removal of woody vegetation or scrub will be carried out within the bird breeding season (March 1st to August 31st)
- Vantage Point surveys will be carried out for the season before and during the decommissioning process. No decommissioning work will be allowed to commence in areas within 500m of an active Hen Harrier nest.
- All edible wastes will be stored in covered segregated containers and disposed of at licensed facilities.
- All measures to mitigate the risks of contamination of watercourses as highlighted in Chapters 7 & 9 will be fully implemented.

- The areas within 50m of the hard-stand and turbine foundations will be subject to a pre-works ornithology walkover to highlight any constraints that may be present (e.g. breeding or resting places of protected species). If any significant constraints are identified, appropriate controls will be developed and integrated into the live decommissioning plan ahead of the commencement of the work.
- Speed limits will be enforced on internal roads.
- A detailed traffic management plan will be incorporated into the decommissioning plan which will ensure that areas of intact blanket bog are unaffected by traffic or storage of plant and materials.

3.9 Traffic Management

Prior to the decommissioning and after the Proposed Lifetime Extension, an updated Decommissioning Plan, including material recycling / disposal and a detailed Traffic Management Plan, will be developed to minimise impacts to the local road network, The Traffic Management Plan will be prepared in consultation with the Local Authority, and agreed with the Local Authority in advance of decommissioning.

3.10 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 existing Taurbeg Wind Farm. The WMP will outline the methods of waste prevention and minimisation by recycling, recovery and reuse at each stage of decommissioning. Disposal of waste will be seen as a last resort.

3.10.1 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 must have all necessary licenses and authorisations. It will be the duty of the Waste Manager on the site of the Taurbeg Wind Farm 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.

The Department of the Environment provides a document entitled, '*Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects (2021).* It is important to emphasise that no demolition will take place at this site.

3.10.2 Waste Management Hierarchy

The waste management hierarchy sets out the most efficient way of managing 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 a number of established markets available for the beneficial use of Construction and Demolition waste such as 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.

3.10.3 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 Taurbeg Wind Farm are outlined in Table 3-1 below.

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

Material Type	Example	EWC Code
Electrical 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

3.10.3.1 Reuse

Many construction materials can be reused a number of times before they have to be disposed on:

- Electrical wiring can be reused on similar wind energy projects, and
- Elements of the turbine components can be reused but this will be determined by the condition that they are in, as well as when the decommissioning actually takes place.

3.10.3.2 Recycling

If a certain type of construction 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 and cabling.

All waste that is produced during the decommissioning phase, including any 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 existing Taurbeg Wind Farm is low, which provides the justification for adopting this method of waste management.

3.10.3.3 Implementation

3.10.3.3.1 *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 be in charge of the implementation of the objectives of the plan, ensuring that all hired waste contractors have the necessary authorisations and that the waste management hierarchy is adhered to. The person nominated must have sufficient authority so that they can ensure everyone working on the decommissioning adheres to the management plan.

3.10.3.3.2 *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, should be able to:

- Distinguish reusable materials from those suitable for recycling;
- Ensure maximum segregation at source;
- Co-operate with a 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.

3.10.3.3.3 *Record Keeping*

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

The fully licensed waste contractors 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

3.10.3.4 Waste Management Plan Conclusion

The WMP will be properly adhered to by all staff involved in the project which will be outlined within the induction process for all site personnel. The waste hierarchy should always be employed when designing the plan to ensure that the least possible amount of waste is produced during decommissioning. Reuse of certain types of 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 and it will be updated as required prior to decommissioning.

3.11 Environmental Management Implementation

3.11.1 Roles and Responsibilities

A Contractor will be appointed to undertake the decommissioning activities. The Site Supervisor and/or Environmental Clerk of Works (ECoW) are the project focal point relating to decommissioning-related environmental aspects.

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 Cork County Council 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 as required throughout the decommissioning works.

3.11.2 Timing of Works

The most intrusive decommissioning works (e.g., excavations and ground profiling) will be carefully scheduled to avoid the coldest winter months and the main bird breeding season (the main breeding season being April to August inclusive). The precise scheduling of works will be reviewed by an ecological/ornithological consultant prior to commencement and agreed with the local authority in advance.

4. HEALTH AND SAFETY

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

- Taurbeg Wind Farm will be decommissioned in accordance with all relevant Health and Safety
- Legislation in force at the time of decommissioning. Current Health and Safety Legislation includes:
- Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005);
- Safety, Health and Welfare at Work (General Application) (Amendment)
- Regulations 2016 (S.I. No. 36 of 2016);
- S.I. No. 528/2021 - Safety, Health and Welfare at Work (Construction) (Amendment) Regulations 2021 and
- Safety, Health and Welfare at Work (Work at Height) Regulations 2006 (S.I. No. 318 of 2006)

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

- A Health and Safety Plan covering all aspects of the decommissioning process will address the Health and Safety requirements in detail. This will be prepared on a preliminary basis at the procurement stage and developed further at decommissioning stage.
- All hazards will be identified, and risks assessed. Where elimination of the risk is not feasible, appropriate mitigation and/or control measures will be established. The contractor will be obliged under the decommissioning contract and current health and safety legislation to adequately provide for all hazards and risks associated with the decommissioning phase of Taurbeg Wind Farm. Safepass registration cards are required for all decommissioning, delivery and security staff. Decommissioning operatives will hold a valid Construction Skills Certificate Scheme card where required. The developer is required to ensure a competent contractor is appointed to carry out the decommissioning works. The contractor will be responsible for the implementation of procedures outlined in the Safety and Health Plan. Fencing will be erected in areas of the Site where uncontrolled access is not permitted.
- All staff will be made aware of and adhere to the Health & Safety Authority's '*Guidelines on the Procurement, Design and Management Requirements of the Safety, Health and Welfare at Work (Construction) (Amendment) Regulations 2021*'. This will encompass the use of all necessary Personal Protective Equipment and adherence to the Site Health and Safety Plan.

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

The PSDP appointed for the decommissioning stage shall be required to perform his/her duties as prescribed in the Safety, Health and Welfare at Work (Construction) Regulations. These duties include (but are not limited to):

- Identify hazards arising from the design or from the technical, organisational, planning or time related aspects of the project;
- Where possible, eliminate the hazards or reduce the risks;

- Communicate necessary control measures, design assumptions or remaining risks to the PSCS so they can be dealt with in the Safety and Health Plan;
- Ensure that the work of designers is coordinated to ensure safety;
- Organise co-operation between designers;
- Prepare a written Safety and Health Plan;
- Prepare a safety file for the completed structure and give it to the client; and
- Notify the Authority and the client of non-compliance with any written directions issued.

The PSCS appointed for the decommissioning stage shall be required to perform his/her duties as prescribed in the Safety, Health and Welfare at Work (Construction) Regulations. These duties include (but are not limited to):

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

5. EMERGENCY RESPONSE PLAN

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

5.1 Emergency Response Procedure

The site ERP includes details on the response required and the responsibilities of all personnel in the event of an emergency. The ERP will require updating and submissions from the contractor/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 within this document.

This is a working document that requires updating throughout the various stages of the project.

5.1.1 Roles and Responsibilities

The chain of command during an emergency response sets out who is responsible for coordinating the response. The Site Supervisor/Decommissioning 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 5-1. In a situation where the Site Supervisor/ Decommissioning Manager is unavailable or incapable of coordinating the emergency response, the responsibility will be transferred to the next person in the chain of command outlined in Figure 5-1. This will be updated throughout the various stages of the project.

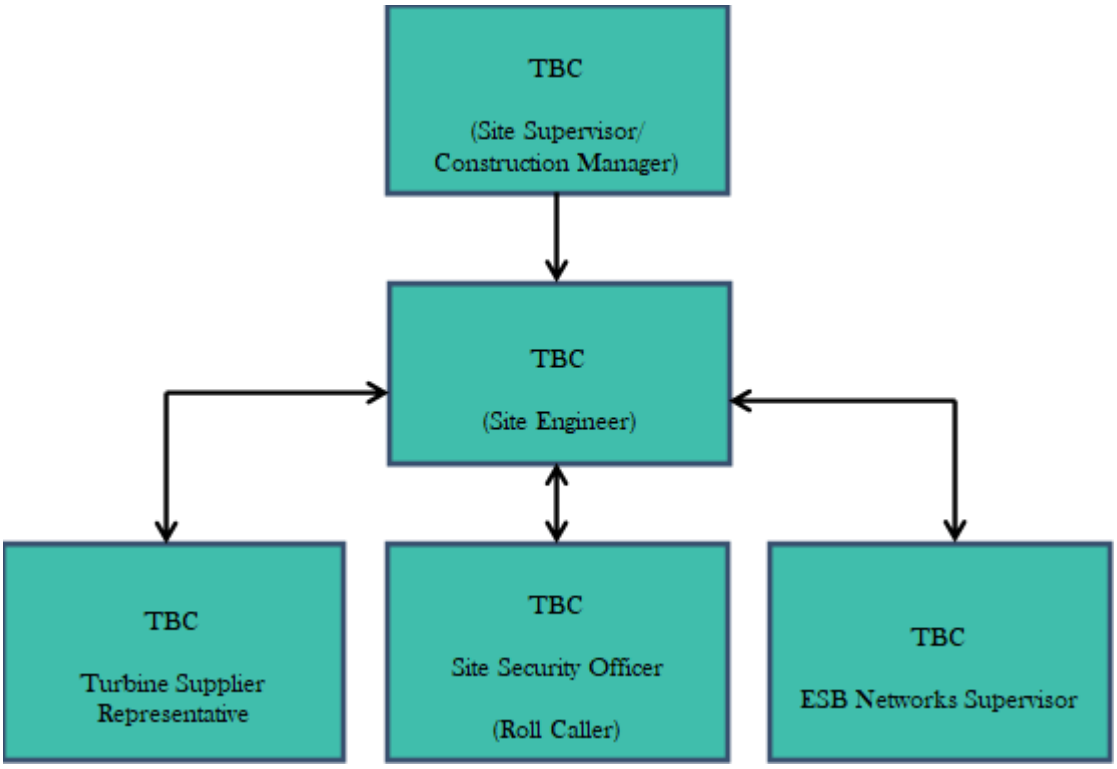

Figure 5-1 Emergency Response Procedure Chain of Command

5.1.2 Initial Steps

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

Table 5-1 Hazards associate 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 tower, scissor lifts, ladders, roofs and turbines	Injury to operative after a fall from 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 in the turbine manufacturers' emergency response plan

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

- Establish the scale of the emergency situation and identify the number of personnel, have been injured or are at risk of being injured.
- Where necessary, sound the emergency siren/foghorn that activates an emergency evacuation on the site. The Site Supervisor/Decommissioning Manager must proceed to the assembly point if the emergency poses any significant threat to their welfare and if there are no injured personnel at the scene that require assistance. The Site Supervisor/Decommissioning Manager will be required to use their own discretion at that point. In the case of fire, the emergency evacuation of the site should proceed, without exception. The site evacuation procedure is outlined in Section 5.1.3.
- Make the area safe if possible and ensure that there is no identifiable risk exists with regard to dealing with the situation e.g. if a machine has turned over, ensure that it is in a safe position so as not to endanger others before assisting the injured.
- Contact the required emergency services or delegate the task to someone. If delegating the task, ensure that the procedures for contacting the emergency services as set out in Section 5.2 is followed.
- Take any further steps that are deemed necessary to make safe or contain the emergency incident e.g. cordon off an area where an incident associated with electrical issues has occurred.
- Contact any regulatory body or service provider as required e.g. ESB Networks the numbers for which as provided in Section 5.3.
- Contact the next of kin of any injured personnel where appropriate.

5.1.3 Site Evacuation/ Fire Drill

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

- Notification of the emergency situation. Provision of a siren or fog-horn 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 site personnel will assemble at this point.
- A roll call will be carried out by the Site Security Officer to account for all personnel on site.
- The Site Security Officer will inform the Site Supervisor/Decommissioning Manager when all personnel have been accounted for. The Site Supervisor/Decommissioning Manager will decide the next course of action, which be determined by the situation that exists at that time and will advise all personnel accordingly.

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

5.1.4 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 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 possible, 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 and dispose of used materials appropriately using a fully licensed waste contractor with the appropriate permits so that further contamination is limited.
- Notify the Environmental Clerk of Works (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 Cork County Council, and the Environmental Protection Agency (EPA), if deemed necessary

The importance of a swift and effective response in the event of such an incident occurring cannot be over emphasised. Environmental incidents are not limited to just fuel spillages. Therefore, any environmental incident must 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 Cork County Council, 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.

5.2 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 should form part of the site induction to male new personnel and sub-contractors aware of any such arrangement or requirement if applicable.

5.3 Contact Details

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

Table 5-2 Emergency Contacts

Contact	Teelphone no.
Emergency Services – Ambulance, Fire, Gardaí	999/112
Doctor – Ath Trasna Medical Centre, Newmarket	(029) 60636
Hospital – University Hospital Kerry	(066) 718 4000
ESB Emergency Services	1850 372 999
Gas Networks Ireland Emergency	1850 20 50 50
Gardaí – local Garda Station – Newmarket Garda Station	(029) 22160
Health and Safety co-ordinator – Health & Safety Services	Confirm prior to decommissioning
Health & Safety Authority	1890 289 389
Inland Fisheries Ireland (IFI)	1890 347 424
Project Supervisor Decommissioning Stage (PSDS)	Confirm prior to decommissioning
Client: Taurbeg Ltd./ Operational Controller	0818 919 595

5.3.1 Procedure for Personnel Tracking

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

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

5.4 Induction Checklist

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

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

ERP Items to be Included in the 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 should form part of the site induction to make new personnel and sub-contractors aware of any such arrangement or requirement if applicable.	
All operatives on site without any exception will have undergo a site induction where they will be required to provide personal contact details which will include contact information for the next of kin.	

6. PROGRAMME OF WORKS

6.1 Decommissioning Schedule

It is expected the decommissioning phase could take between 3-9 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 exactly when decommissioning will take place.

The planning and scheduling of the main decommissioning task items are outlined in Figure 6-1 below, where the 1st January has been shown as an indicative start date for decommissioning to commence.

Figure 6-1 Indicative Decommissioning Schedule

ID	Task Name	Task Description	Month 1-3	Month 3-6
1	Site Health and Safety			
2	Turbine Decommissioning	Disconnect Power Output		
3	Turbine & Met Mast Dismantling	Disassemble Turbine Components		
4	Turbine Removal	Transport of all Turbine Components off Site		
6	Turbine & Met Mast Foundations Covering	Reinstate Foundations Areas by Covering with Soil Material		
7	Accommodation Areas Reinstatment	Reinstate Soil Berm and Boundary treatments		

7. MITIGATION PROPOSALS

All mitigation measures relating to the decommissioning phase of the existing Taurbeg Wind Farm have been set out in the various sections of the Environmental Impact Assessment Report (EIAR) and Chapter 18 which accompanies this application.

This section of the Decommissioning Plan groups together all of the mitigation measures presented in the planning documentation. The mitigation measures are presented in the following pages in Table 7-1.

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. The tabular format in which the below information is presented, can be further expanded upon during the course of operation and provides a reporting template for site compliance audits.

Table 7-1 Decommissioning Phase Mitigation Measures

Ref no.	Reference Location	Mitigation Measures	Audit Result	Action Required
		Decommissioning Phase		
MM1	EIAR Chapter 4	In the event that the Proposed Lifetime Extension is decommissioned after the 10 years extension of life, an updated Decommissioning Plan will be prepared for agreement with the local authority. This will be a comprehensive plan updated in line with decommissioning methodologies that may exist at the time. The Final Decommissioning Plan will therefore be agreed with the Local Authority at least three months prior to decommissioning the Proposed Lifetime Extension.		
MM2	EIAR Chapter 5	Residential Amenity and Health and Safety will be protected during the decommissioning Phase via the following mitigation measures: › Establishing channels of communication between the Applicant or contractor, Local Authorities and local residents; › The hours of decommissioning works (and associated traffic movements) will, insofar as possible, be limited to avoid unsociable hours. Activities shall generally be restricted to between 07:00hrs and 19:00hrs Monday to Friday and between 07:00hrs and 13:00hrs on Saturdays, with no activities on Sundays or public holidays unless in the event of an emergency. However, to ensure that optimal use is made of good weather period or at critical periods within the programme (e.g., crane use) or to accommodate removal of large turbine component along public routes it could be necessary on occasion to work outside of these hours. Any such out of hours working will be notified in advance to the Local Authority and local residents.		
MM3	EIAR Chapter 6, Decommissioning Plan	Regarding Biodiversity at the site, the decommissioning phase will involve the following best practice mitigation measures:		

		› All measures to mitigate the risks of contamination of watercourses as outlined in Chapter 9, will be fully implemented. › The areas within 50m of the hard-stand and turbine foundations will be subject to a pre-works terrestrial ecology walkover to highlight any constraints that may be present (e.g. breeding or resting places of protected species, presence of Invasive Plant Species). › If any significant constraints are identified appropriate controls will be developed and integrated into the live decommissioning plan ahead of the commencement of the work. › If any Third Schedule Invasive species are present in or adjacent to the works footprint, an Invasive Species Management Plan (ISMP) will be developed, and all recommendations implemented in accordance with the contemporary best practice measures. › Speed limits will be enforced on internal roads. › All edible wastes will be stored in covered segregated containers and disposed of at licensed facilities. › No refuelling or other hydrocarbon related usage will be undertaken within 50m of any watercourse in relation to maintenance vehicles, plant or machinery. › Any import of soil or fill necessary in the decommissioning process shall be from approved sources and appropriately tested or inspected to minimise the risk of import of invasive species. Only soil appropriate to the site (pH, soil type) will be used. The re-seeding or natural revegetation of reinstated areas will proceed on the advice of a suitably qualified ecologist. Any seed mix used will be on the approval of the ecologist.		
MM4	Chapter 7, Decommissioning Plan	Regarding Ornithology and Avian Populations, the decommissioning plan will include industry best practice measures to mitigate the impact of works on a bird, which may include the following: › All machinery will work from the existing access road corridor. › Any required vegetation removal will be conducted in line with the provisions of the Wildlife Acts 1976-2021.		

		› Decommissioning works will begin outside the bird nesting season as defined by the Wildlife Act 1976 as amended (1st of March to the 31st of August). Any requirement for works to run into the subsequent breeding season will be subject to pre-works bird surveys to confirm the absence of breeding birds of conservation concern. If such breeding activity is identified during the works, the nest sites will be located, and no works shall be undertaken within an agreed buffer in line with industry best practise. › Noise limits, noise control measures, hours of operation (i.e. dusk and dawn is high faunal activity time) and selection of plant items will be considered in relation to disturbance of birds. All plant and equipment for use will comply with the European Communities (Noise Emission By Equipment For Use Outdoors) Regulations, 2001, as amended (SI 632/2001). Plant machinery will also be turned off when not in use. › Silt fences will be installed as an additional water protection measure around existing watercourses. › An Environmental Clerk of Works and Project Ecologist will be appointed. Duties will include: › Organise the undertaking of a pre-works walkover bird survey to ensure that significant effects on birds will be avoided. › Inform and educate on-site personnel of the ornithological and ecological sensitivities within the Site. › Oversee management of ornithological issues during the works period and advise on ornithological issues as they arise. › Provide guidance to contractors to ensure legal compliance with respect to protected species onsite. › Liaise with officers of consenting authorities and other relevant bodies with regular updates in relation to decommissioning progress. Areas of marsh & fen are unaffected by traffic or storage of plant and materials. **Mitigation Measures to protect Red Grouse** › Any decommissioning works envisioned to take place during the period April – July will be preceded by a pre-commencement survey to investigate the presence of breeding red grouse. The survey will follow the methodology outlined in Section		

		7.2.4.2.7 of Chapter 7 (i.e. a tape-lure survey during period December - March to identify territorial males); › Should territorial males be recorded during survey, then these works will be restricted to outside the main breeding season for red grouse, i.e. April – July **Mitigation Measures to protect Nightjar** › Any works within 500m of the identified area of contiguous breeding habitat during the period May to August will be preceded by a pre-commencement survey to investigate whether any potential breeding nightjar are present within 500m of the proposed works. The survey will follow the methodology outlined in Section 7.2.4.2.6 (i.e. dusk surveys during period late May to July to identify churring males); › Should churring males be recorded during the survey, then the works within 500m of the suitable breeding habitat will be restricted to outside the main breeding season for nightjar, i.e. May - August		
MM5	Chapter 8, Decommissioning Plan	Upon decommissioning of the existing Taurbeg Wind Farm, the wind turbines will be disassembled. All above-ground turbine components will be separated and removed off-site. It is proposed to leave turbine foundations in place underground and to cover them with soil and reseed as appropriate. Leaving the turbine foundations in-situ is considered a more environmentally prudent option as excavation works can be avoided. It is proposed to leave access roads in-situ, as these are in use by the participating landowners to access their lands and as existing walking trails. It is proposed to leave underground cables in place where they are below a level likely to be impacted by typical agricultural works. During decommissioning, all plant and machinery will keep to existing infrastructure (e.g. tracks and hardstanding) and will not encroach upon adjacent habitats unless this is essential in order to progress the decommissioning works. Reinstatement (i.e. backfilling of the turbine foundations) will be carried out using site-won materials without compromising or damaging established/existing habitats. Hardstand areas		

		will be covered with peatland vegetation/scraw or poorly humified peat to encourage vegetation growth and reduce run-off and sedimentation.		
MM6	Chapter 9	The disassembly and removal of the turbines will not have an impact on the hydrological/hydrogeological environment at the wind farm site, however, mitigation measures to avoid contamination by accidental fuel leakage and compaction of soil by on-site plant will be implemented as per the operational phase mitigation measures. These include: › Vehicles used during the decommissioning phase will be refuelled off site before entering the site; › Spill kits will be available in all site vehicles to deal with an accidental spillage and breakdowns; › An emergency plan for the extended operational phase to deal with accidental spillages and breakdowns will be contained in the Operational and Environmental Management Plan; › All transformers and substation areas are bunded to 110% of the volume of oil used in each transformer/substation; and, › An emergency plan for the extended operational phase to deal with accidental spillages will be contained in the Operational and Environmental Management Plan; › Natural vegetation filters are used regularly across the Site where the local drainage and topography allow attenuation of surface water runoff; › Interceptor drains are installed up-gradient of infrastructure to collect clean surface runoff in order to minimise the amount of runoff reaching areas where suspended sediment could become entrained. It is now directed to areas where it can be re-distributed onto natural vegetation; › Swales/roadside drains are used to collect runoff from access roads and turbines hardstanding areas of the site, likely to have entrained suspended sediment, and channel it onto natural vegetation filters; › The existing drainage system at the site provides flood attenuation and has not resulted in any increased in the downstream flood risk.		

MM7	EIAR Chapter 10, Decommissioning Plan	Regarding dust: › 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 Site Manager 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; › The transport of soils or other material, which has significant potential to generate dust, will be undertaken in tarpaulin-covered vehicles where necessary; › All site related traffic will have speed restrictions on un-surfaced roads to 15 kph; › Daily inspection of the site to examine dust measures and their effectiveness, and, › When necessary, sections of the haul route will be swept using a truck mounted vacuum sweeper.		
MM8	EIAR Chapter 12	The contract documents will specify that the Contractor undertaking the decommissioning works will be obliged to adopt best practice noise abatement measures contained in British Standard BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise and BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Vibration. The following best practice mitigation measures from these documents will be implemented as required for the duration of the decommissioning phase: › Limiting the hours during which site activities likely to create high levels of noise or vibration are permitted; › Establishing channels of communication between the contractor/developer, Local Authority and residents;		

		• Monitoring typical levels of noise and vibration during critical periods and at sensitive locations; • Selection of plant with low inherent potential for generation of noise and/ or vibration where practical; • Placing of noise generating / vibratory plant as far away from sensitive properties as practical within the site constraints, and; • The hours of construction activity will be limited to avoid unsociable hours where possible. Works operations shall generally be restricted to between 7:00hrs and 19:00hrs Monday to Friday and Saturday between 7:00hrs and 13:00hrs.		
MM9	EIAR Chapter 14	Regarding Cultural Heritage during the decommissioning phase, there will be minimal works required and it is proposed that site roads be left on-site. No potential direct impacts to the archaeological, architectural or cultural heritage resources were identified and therefore no mitigation is required to be proposed.		
MM10	EIAR Chapter 15	Prior to decommissioning, an updated Decommissioning Plan, including material recycling/disposal and a Traffic Management Plan, will be developed to minimise impacts to local traffic. The updated decommissioning plan will be prepared in consultation with the local authority, and the final documentation will be agreed with the local authority in advance of decommissioning.		

8. MONITORING PROPOSALS

All monitoring proposals relating to the decommissioning phase of the existing Taurbeg Wind Farm have been set out in the various sections of the EIAR, which accompanies this planning application.

This section of the Decommissioning Plan groups together all of the monitoring proposals presented in the planning documentation. The monitoring proposals are presented in the following pages in Table 8-1.

By presenting the monitoring proposals in the below format, it is intended to provide an easy to audit list that can be reviewed and reported on during the operational phase of the project. The tabular format in which the below information is presented, can be further expanded upon during the course of operation to provide a reporting template for site compliance audits.

Table 8-1 Schedule of Decommissioning Phase Monitoring Proposals

Ref No.	Reference Location	Mitigation Measure	Frequency	Reporting Period	Responsibility
Decommissioning Phase					
MD1	Chapter 6, Decommissioning Plan	The Site Manager in consultation with the ECoW will be responsible for employing the services of a suitably qualified ecologist and any other suitably qualified professionals as required throughout the decommissioning works.			
MD2	Chapter 7	Decommissioning monitoring surveys will be undertaken prior to the commencement of works associated with decommissioning at the Site. Additionally, if works are to continue into the breeding season, surveys will be required monthly from April to July. The survey will include a thorough walkover survey to a 500m radius of the development footprint and all works areas, where access allows. If winter roosting or breeding activity of birds of high conservation concern is identified during the decommissioning phase (e.g. red grouse or nightjar), no works shall be undertaken within a species-specific disturbance buffer (e.g. Forestry Commission Scotland, 2006; Ruddock and Whitfield, 2007; Goodship and Furness, 2022) in line with industry best practice. No works shall be permitted within the buffer	As required	As required	Project Ornithologist

		until it can be demonstrated that the roost/nest is no longer occupied			

9. COMPLIANCE AND REVIEW

9.1 Site Inspections and Environmental Audits

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

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

9.2 Auditing

An Environmental Audit will first be carried out prior to the decommissioning phase of the existing Taurbeg Wind Farm to ensure the operational phase mitigation measures that are still in place as required are adequate. Further environmental audits will be carried out on a monthly basis during the decommissioning phase of the project and on completion of the decommissioning works.

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, the audits are 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 the environmental audits will be provided to project management personnel.

9.3 Environmental Compliance

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

- **Environmental Near Miss**: An occurrence which if not controlled or due to its nature could lead to an Environmental Incident.
- **Environmental Incident:** Any occurrence which has potential, due to its scale and nature, to migrate from source and have an environmental impact beyond the site 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 Decommissioning Plan.

9.4 Corrective Action Procedure

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

- Environmental Audits;
- Environmental Inspections and reviews;
- Environmental Monitoring;
- Environmental Incidents, and;
- Environmental Complaints.

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

9.5 Decommissioning Phase Plan Review

The Decommissioning Plan will be updated and reviewed prior to commencement of decommissioning.