

Environmental Impact Assessment Report (EIAR)

Cunlaghfadda Green Energy Project, Co. Mayo

Chapter 16 – Major Accidents and Natural Disasters



16. MAJOR ACCIDENTS AND NATURAL DISASTERS

16.1 Introduction

This section of the Environmental Impact Assessment Report (EIAR) describes the likely significant adverse effects on the environment arising from the vulnerability of the Proposed Project, as detailed in Chapter 4: Description of the Proposed Project, to risks of major accidents and/or natural disasters, as well as the potential of the Proposed Project itself to cause potential major accidents and/or natural disasters. It has been completed in accordance with the guidance set out by the Environmental Protection Agency (EPA) in ‘Guidelines on Information to be contained in Environmental Impact Statements’ (EPA, 2022) and the European Commission in relation to Environmental Impact Assessment of Projects (Directive 2011/92/EU, as amended by 2014/52/EU), namely ‘Guidance on the preparation of the Environmental Impact Assessment Report’.

The assessment of the vulnerability of the Proposed Project to major accidents and/or natural disasters, as well as the risk of the Proposed Project itself causing major accidents and/or natural disasters is carried out in compliance with the EIA Directive (2014/52/EU) which states the need to assess:

“The expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or natural disasters which are relevant to the project concerned.”

The objective of this assessment is to ensure that appropriate precautionary actions are taken for the Proposed Project.

“Because of their vulnerability to major accidents and/or natural disasters, are likely to have significant adverse effects on the environment”.

Based on the requirements of the EIA Directive, this chapter seeks to determine:

- The relevant major accidents and/or natural disasters, if any, that the Proposed Project could be vulnerable to or could cause;
- The potential for these major accidents and/or natural disasters to result in likely significant adverse environmental effect(s); and
- The measures that are in place, or need to be in place, to prevent or mitigate the likely significant adverse effects of such events on the environment.

For the purposes of this EIAR, the various project components are described and assessed using the following references: ‘Proposed Project’, ‘Proposed Wind Farm’, ‘Proposed Grid Connection’ and ‘Site’. Please see Section 1.1.1 of this EIAR for further details. A detailed description of the Proposed Project is provided in Chapter 4: Description of the Proposed Project of this EIAR.

16.1.1 Statement of Authority

This section of the EIAR has been prepared by Joye Atkinson with input from Natalia Stolarska and reviewed by Órla Murphy, of MKO.

Joye is a Graduate Environmental Scientist with MKO and holds a BSc (Hons) in Social Science from University College Dublin. Prior to joining MKO, she completed a one-year internship with RMLA Planning, where she contributed to a range of projects across both the public and private sectors. Joye’s core strengths include drafting Environmental Impact Assessment Report (EIAR) chapters, as well as

strong report writing skills, with the ability to present complex environmental data clearly, concisely, and in line with regulatory requirements. At MKO, Joye's work focuses on report writing, EIAR chapter preparation, and GIS-based mapping. She has contributed to multiple onshore wind projects across Ireland, supporting both technical analysis and environmental assessment.

In her role as a project manager, Natalia Stolarska is a Project Environmental Scientist who has been working with MKO since 2023. Natalia holds a BSc in Earth and Ocean Science and an MSc in Environmental Leadership. Natalia's key strengths and areas of expertise are in drafting EIAR report chapters, environmental impact assessment screening reports, wind farm feasibility studies and QGIS mapping. Since joining MKO in September 2023, Natalia has been involved in a range of wind farm projects, assisting with field work, client briefing notes, constraints mapping and drafting EIAR chapters, with more projects in the pipeline.

Órla works with and co-ordinates large multidisciplinary teams including members from MKO's Environmental, Planning, Ecological and Ornithological departments as well as sub-contractors from various fields in the preparation and production of EIARs. Órla Murphy is a Senior Environmental Scientist with McCarthy Keville O'Sullivan Ltd. with over 10 years of experience in private consultancy. Órla holds a BSc (Hons) in Geography from Queens University Belfast & a MSc in Environmental Protection and Management from the University of Edinburgh. Prior to taking up her position with McCarthy Keville O'Sullivan in January 2018, Órla worked as an Environmental Project Assistant with ITP Energised in Scotland. Órla's key strengths and areas of expertise are in Environmental Protection and Management, EIA, Project Management, Renewable Energy and Peatland Management, where she has carried out research projects and site work relating to restoration and management of peatland sites in both Scotland and Northern Ireland. On joining MKO Órla has been involved on a range of renewable energy infrastructure projects. In her role as a project manager, Órla works with and co-ordinates large multidisciplinary teams including members from MKO's Environmental, Planning, Ecological and Ornithological departments as well as sub-contractors from various fields in the preparation and production of EIARs. Within MKO, Órla plays a role in the management of and sharing of knowledge with junior members of staff and works as part of a large multi-disciplinary team to produce EIA Reports.

16.2 Assessment Methodology

16.2.1 General

The following sources of information and literature pertinent to the area were used in the preparation of this section:

- Census of Ireland 2022¹
- Regional Planning Guidelines for the West Region (2010 – 2022)²
- Regional Spatial and Economic Strategy (RSES) Northern and Western Regional Assembly 2020 – 2032³
- Mayo County Development Plan (2022 – 2028)⁴
- Mayo County Council Local Authority Climate Action Plan (LACAP) 2024-2029⁵

¹ Central Statistics Office <https://www.cso.ie/en/census/>

² Regional Planning Guidelines for the West Region (2010-2022) < <https://www.nwra.ie/wp-content/uploads/Planning-Guidelines-for-the-West-Region.pdf> >

³ Regional Spatial and Economic Strategy (RSES) Northern and Western Regional Assembly 2020 – 2032
< <https://www.nwra.ie/rses/#:~:text=Regional%20Spatial%20and%20Economic%20Strategy,policies%20and%20objectives%20of%20Government.> >

⁴ Mayo County Development Plan <2022-2028 <https://consult.mayo.ie/sites/default/files/Vol.%201%20-%20Mayo%20CDP%2022-28%20Final.pdf> >

⁵ Mayo County Council Local Authority Climate Action Plan (LACAP) <2024-2029
https://www.mayo.ie/getmedia/dfab91e5-939b-41c7-883e-0cee6e359900/139306-Mayo-County-Council-Climate-Action-Plan_2024_V2_Final.pdf >

- Mayo County Council Major Emergency Plan (2021)⁶
- Mayo County Council Website⁷, and
- Fáilte Ireland⁸
- HSE Emergency Management Area 2 Crisis Management Team Major Emergency Plan: Covering Geographical Areas of Counties Galway, Mayo and Roscommon) (June 2024)⁹

Major accidents or natural disasters are hazards which have the potential to affect the Proposed Project and lead to environmental effects directly and indirectly. These include accidents during construction, operation and decommissioning of the Proposed Project caused by operational failure and/or natural hazards. The assessment of the risk of major accidents and/or disaster is considered in relation to the information required to be provided in the EIAR, i.e., Chapter 5: Population and Human Health, Chapter 6: Biodiversity, Chapter 8: Land, Soil and Geology, Chapter 9: Water, Chapter 10: Air Quality, Chapter 11: Climate, Chapter 13: Landscape and Visual, Chapter 14: Archaeological, Architectural and Cultural Heritage, and Chapter 15: Material Assets

16.2.2 Legislative Context

An assessment of the following key elements was undertaken in accordance with the EIA Directive (2014/52/EU):

The vulnerability of the Proposed Project to potential major accidents and/ or natural disasters. The potential for the Proposed Project to cause major accidents and/or natural disasters which pose a risk to human health, cultural heritage and/or the environment.

The information relevant to major accidents and/or disasters to be included in the EIAR is set out in paragraph 8 of Annex IV of the EIA Directive as follows:

“(8) A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies”.

16.2.2.1 Guidance Documents

The following guidance documents have been consulted in the preparation of this section:

- European Commission (2017). Environmental Impact Assessment of Projects – Guidance on the preparation of Environmental Impact Assessment Reports
- Environmental Protection Agency (2022) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports
- Department of Environment, Heritage and Local Government (2010) *A Guide to Risk Assessment in Major Emergency Management*

⁶ Mayo County Council (2021) Mayo Major Emergency Plan <<https://www.mayo.ie/getmedia/7ebcdabb3-45ab-4dfe-8043-b24fd2c18d6c/Major-Emergency-Plan-2021.pdf>>

⁷ <https://www.mayo.ie/en-ie/home>

⁸ Fáilte Ireland <https://www.failteireland.ie/>

⁹ HSE Emergency Management Area 2 Crisis Management Team Major Emergency Plan: Covering Geographical Areas of Counties Galway, Mayo and Roscommon) (June 2024) <<https://www.hse.ie/eng/services/list/3/emergencymanagement/area-mep/hse-emergency-management-area-2-emergency-plan.pdf>>

- Environmental Protection Agency (2014) Guidance on Assessing and Costing Environmental Liabilities
- Department of Defence (2024) National Risk Assessment 2024: Overview of Strategic Risks

On a regional scale, Co. Mayo falls under the scope of the HSE West (Area 2) Major Emergency Plan¹⁰.

16.2.3 Categorisation of the Baseline Environment

A desk-study has been completed to establish the baseline environment for which the proposed risk assessment is being carried out. This will influence both the likelihood and the impact of a major accident or natural disaster. Local and regional context has been established prior to undertaking the risk assessment to develop an understanding of the vulnerability and resilience of the area to emergency situations.

Further detail on the baseline environment is provided in Section 16.3.

16.2.4 Impact Assessment Methodology

16.2.4.1 Introduction

A wind farm is not a recognised source of pollution. It is not subject to Industrial Emissions Directive regulation or any other EPA environmental regulatory consent. Should a major accident or natural disaster occur, the potential sources of pollution onsite during the construction, operational and decommissioning phases of this type of development are limited and of low environmental risk. Sources of pollution with the potential to cause significant environmental pollution and associated negative effects such as bulk storage of hydrocarbons or chemicals, storage of wastes, management of flammable materials etc. are limited and so there is an inherent low level of environmental risk associated with a major accident or natural disaster impacting the Proposed Project and causing environmental damage.

There is low potential for significant natural disasters to occur at the Proposed Project. Ireland is a geologically stable country with a mild temperate climate. According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are “normal” in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, buildings or structures in Ireland are extremely unlikely to be damaged or collapse due to seismic activity. Irelands geographic position means that the occurrence of tsunamis, which may pose a risk to developments similar to the Proposed Project in other geographic locations, are of a low likelihood, and are less likely to be of a significant magnitude to cause an accident or disaster.

The potential natural disasters that may occur are therefore limited to issues such as flooding and fire and are described in the sections below.

Major industrial accidents involving dangerous substances pose a significant threat to humans and the environment; such accidents can give rise to serious injury to people or serious damage to the environment, both on and off the site of an accident. The Proposed Project is not regulated, connected to, or close to any site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations i.e., SEVESO sites and so there are no potential effects from this source. Mitigation and monitoring measures to avoid the release of fuels and hazardous materials at the Site are detailed below in Section 16.4.2, in Section 9.5.2.5 of Chapter 9: Water, Chapter 18: Schedule of Mitigation, and in the CEMP (Appendix 4-5).

¹⁰ HSE Emergency Management Area 2 Crisis Management Team Major Emergency Plan (Covering Geographical Areas of Counties Galway, Mayo and Roscommon) June 2024

The Proposed Project has low potential to cause natural disasters or major accidents. As detailed in Appendix 8-1 (Geotechnical & Peat Stability Report) of Chapter 8: Land, Soils and Geology of this EIAR, the published soil map (www.epa.ie) for the area shows that the Proposed Project site contains peat.

The Site is relatively flat and so there is low risk for peat failure. The potential natural disasters and/or major accidents that may occur are therefore limited to issues such as flooding as there are no watercourses located within the Site, impacts on infrastructure, fire etc are addressed in the sections below.

Current EIA practice already includes an assessment of some potential accidents and disaster scenarios such as pollution incidents to ground and watercourses as well as assessment of flooding events and peat instability. These are described in detail in the relevant EIAR assessment chapters (Refer to Chapters 5 to 15 and Appendix 9-1 Flood Risk Assessment for further detail).

16.2.4.2 Site-Specific Risk Assessment Methodology

A site-specific risk assessment identifies and quantifies risks focusing on unplanned, but possible and plausible events occurring during the construction, operation and decommissioning of the Proposed Wind Farm. The approach to identifying and quantifying risks associated with the Proposed Project by means of a site-specific risk assessment is derived from the DoEHLG 'A Framework for Major Emergency Management – A Guide to Regional Risk Assessment' 2024 document¹¹ and the EPA 'Guidance on assessing and costing environmental liabilities' 2014 document¹². The following steps were taken as part of the site-specific risk assessment:

- Risk Identification;
- Risk Analysis likelihood and consequence; and,
- Risk Evaluation

16.2.4.2.1 Risk Identification

Risks have been reviewed through the identification of reasonably foreseeable risks in consultation with relevant contributors to this EIAR. The identification of risks has focussed on non-standard but plausible incidents that could occur at the Proposed Project during construction, operation and decommissioning.

In accordance with the European Commission EIAR Guidance (EC, 2017), risks are identified in respect of the projects:

1. *Potential to cause accidents and/or disasters,*
2. *Vulnerability to potential disaster/accident*

¹¹ DoEHLG (2024). A Framework for Major Emergency Management – A Guide to Regional Risk Assessment' Available at: https://assets.gov.ie/static/documents/Guide_to_Regional_Risk_Assessment_September_2024.pdf

¹² EPA (2014) Guidance on assessing and costing environmental liabilities. Available at https://www.epa.ie/publications/compliance-enforcement/licensees/reporting/financial-provisions/EPA_OEE-Guidance-and-Assessing-WEB.pdf

Identify the Reasonable Worst Case Scenario (RWCS) Classification of Likelihood

The RWCS is defined in BS EN 31010:2010 p85/3 as “*The most serious credible outcomes consequences*” for each risk

After identifying the potential risks and RWCS, the likelihood of occurrence of each risk has been assessed. An analysis of safety procedures and proposed environmental controls was considered when estimating likelihood of identified potential risks occurring. Table 16-1 defines the likelihood criteria that have been applied.

The approach adopted has assumed a ‘risk likelihood’ where one or more aspects of the likelihood description are met.

Table 16-1 Classification of Likelihood (Source: Department of Environment, Heritage and Local Government, 2010)

Rating	Classification	Average Recurrence Interval
1	Extremely Unlikely	100 or more years between occurrences.
2	Very Unlikely	51-100 years between occurrences.
3	Unlikely	11-50 years between occurrences.
4	Likely	1-10 years between occurrences.
5	Very Likely	Ongoing /Less than one year between occurrences.

Note: statistical estimate of the average period of time between occurrences of an event given scale

Classification of Impact

The consequence impact rating assigned to each risk has assumed that all proposed mitigation measures and/or safety procedures have failed to prevent the major accident and/or disaster. Furthermore, the Mayo County Council Major Emergency Plan (2021) will work to reduce the consequence impact of any major accident or disaster. The consequence of the impact if the event occurs has been assigned as described in Table 16-2.

The consequence impact of a risk to/from the Proposed Project has been determined where one or more aspects of the consequence of the impact description are met, i.e., risks that have no consequence have been excluded from the assessment. In determination of the consequence rating, the highest score under any of the impact categories (People, Environment, Essential Services or Social) is allocated, not the mean or aggregate.

Table 16-2 Classification of Impact (Source: DoEHLG, 2024)

Impact Category	People	Environment	Essential Services	Social
1 Very Low Impact	Deaths less than 1 in 250,000 people for population of interest OR Critical injuries/illness less than 1 in 250,000 OR Serious injuries less than 1 in 100,000 OR Minor injuries only	Simple localised contamination	Very low disruption to the delivery of services essential for the maintenance of vital societal functions or economic activities	Limited disruption to community
2 Low Impact	Deaths greater than 1 in 250,000 people for population of interest OR Critical injuries/illness greater than 1 in 250,000 OR Serious injuries greater than 1 in 100,000	Simple, regional contamination, effects of short duration	Low disruption to the delivery of services essential for the maintenance of vital societal functions or economic activities	Community functioning with considerable inconvenience
3 Moderate Impact	Deaths greater than 1 in 100,000 people for population of interest OR Critical injuries/illness greater than 1 in 100,000 OR Serious injuries greater than 1 in 40,000	Heavy contamination localised effects of extended duration	Medium disruption to the delivery of services essential for the maintenance of vital societal functions or economic activities	Community functioning poorly
4 High Impact	Deaths greater than 1 in 100,000 people for population of interest OR Critical injuries/illness greater than 1 in 100,000 OR Serious injuries greater than 1 in 40,000	Heavy contamination, widespread effects or extended duration	High disruption to the delivery of services essential for the maintenance of vital societal functions or economic activities	Community only partially functioning
5 Very High Impact	Deaths greater than 1 in 40,000 people for population of interest OR	Very heavy contamination, widespread effects of extended duration	Loss of delivery of services essential for the maintenance of vital societal	Community unable to function without support

Impact Category	People	Environment	Essential Services	Social
	Critical injuries/illness greater than 1 in 40,000 OR Serious injuries greater than 1 in 20,000		functions or economic activities	

Risk Evaluation

Once classified, the likelihood and consequence ratings have been multiplied to establish a ‘risk score’ to support the evaluation of risks by means of a risk matrix.

The risk matrix sourced from the DoHLGH (2024) ‘*A Framework for Major Emergency Management – A Guide to Regional Risk Assessment*’ has been amended to align with the EPA (2014) Guidance on assessing and costing environmental liabilities’ risk matrix as outlined in Table 16-3 below to indicate the critical nature of each risk. This risk matrix has then been applied to evaluate each of the risks associated with the Proposed Project. The risk matrix is colour coded to provide a broad indication of the critical nature of each risk:

- The red zone represents ‘high risk scenarios’;
- The amber zone represents ‘medium risk scenarios’; and
- The green zone represents ‘low risk scenarios.’

Table 16-3 Risk Matrix (Source: EPA, 2014)

		Consequence Rating				
		1.Very Low	2.Low	3. Moderate	4.High	5.Very High
Likelihood Rating	5. Very Likely					
	4. Likely					
	3. Unlikely					
	2. Very Unlikely					
	1. Extremely Unlikely					

16.3 Baseline Conditions

The Major Emergency Plans prepared by Mayo County Council (2021) outlines the following potential major emergency scenarios in the county. General and Specific Risks identified in the Mayo Major Emergency Plan are outlined below.

The relevant scenarios are scoped in for assessment in Sections 16.3.1- 16.3.5 below. Risks which are extremely unlikely and would not interact with the Proposed Project due to the location and scale such as Mass Casualty and Terrorist CBRN, Tsunami event, Marine Incident with Ferry

Epidemics/pandemics, Liquid petroleum gas and Crowd safety were scoped out due to the unlikelihood of interaction.

Severe Weather

- > Severe Weather Event
- > Inland Flooding

Industrial Accident/ Seveso/ Hazmat

- > Industrial Incident at Seveso Upper Tier site
- > Oil Pollution

Transport Incident

- > Road Traffic Collision,
- > Rail Accident
- > Aircraft collision/hull loss,

Public Health

- >
- > Landslides

Loss of Utilities

- > Contamination of Water Supply

The risks which have been underlined above are considered the most relevant in the context of the Proposed Project and to this assessment are discussed in further detail below. In addition, other risks that have not been identified in the above plan have also been included below i.e. Peat Stability, Fire Risk and Loss of Critical Infrastructure.

It should also be noted that there are site/event specific emergency plans for Mayo County Council.

- > Flood Response Plan
- > Protection of Public Water Supplies

These are considered in the appropriate sections below.

16.3.1 Natural

Inland Flooding

A Flood Risk Assessment for the Site is included as Appendix 9-1 of this EIAR.

OPW's flood risk maps (<https://www.floodinfo.ie/map/floodmaps/>) and OSI's historical 6-inch sheets and 25-inch basemaps were consulted to identify if any part of the Site may be at risk of fluvial flooding.

The flood risk associated with the Proposed Project is low. The proposed infrastructure, within the Site, is situated above any OPW-mapped, indicative flood extents and does not interact with any rivers or lakes. The central section of the Site drains towards Drumady Lough situated immediately to the southeast. Drainage management is proposed which retains the existing drainage characteristics, and the Proposed Project will not change fluvial flood risk within or downstream of the Site.

The proposed drainage system will serve to control discharges of runoff waters to streams at greenfield runoff rates using a combination of interceptor drains, check dams, swales, settlement ponds, and buffered, disperse outfalls. The majority of discharges will be outside a 50 m buffer zone along all watercourses.

As such, the Proposed Project will not augment flood risk downstream of the Site. The Proposed Project thus complies with the objectives of the County Mayo Development Plan (2022-2028) and is compatible with the county-wide Strategic Flood Risk Assessment.

Peat Stability/Landslides

A comprehensive and robust Geotechnical and Peat Stability Report was undertaken by Fehily Timoney (refer to Appendix 8-1) for the Proposed Project and was used to inform the design process including the siting of all proposed main infrastructure locations and drainage control measures. The PSRA was informed by the Scottish Government's 2017 guidance document, Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments. Intrusive ground investigation works were carried out as part of the PSRA and included peat depth probing, shear strength testing, ground augering/coring and trial pitting. The extensive suite of ground investigations, the robust PSRA and the lessons learned from previous peat slide events on similar sites will ensure that the risk of such an event, occurring during the construction, operation or decommissioning of the Proposed Project is minimised.

The findings of the PSRA showed that the site has a low risk of peat failure and is suitable for the Proposed Project. The findings include recommendations and control measures for construction work in peat lands, all of which will be implemented in full to ensure that all works adhere to an acceptable standard of safety.

The Site is typically covered in a mixture of bare cutover and cutaway peat, revegetation of bare peat, forestry and agricultural pastures. Peat thicknesses recorded during the site walkovers from 262 no. probes ranged from 0 to 6.1m with an average depth of 1.2m. 91% of the probes recorded peat depths of less than 3.0m. A number of localised readings were recorded where peat depths were 3.5 to 6.1m. The deeper peat areas were avoided, where possible, when optimising the wind farm layout for the site. The peat depths recorded at the turbine locations varied from 0.0 to 2.8m with an average depth of 0.8m.

An analysis of peat sliding was carried out at the main infrastructure locations across the Site for both the undrained and drained conditions. The purpose of the analysis was to determine the Factor of Safety (FoS) of the peat slopes.

An undrained analysis was carried out, which applies in the short-term during construction. For the undrained condition, the calculated FoS for load conditions 1 and 2 for the locations analysed, showed that all locations have an acceptable FoS of greater than 1.3, indicating a low risk of peat failure. The undrained analysis is considered the most critical condition for the peat slopes.

A drained analysis was also carried out, which examined the effect of in particular, rainfall on the existing stability of the natural peat slopes on site. For the drained condition, the calculated FoS, showed that all locations have an acceptable FoS of greater than 1.3.

The Geotechnical and Peat Stability Report at each infrastructure location including, along access tracks, in peat and spoil storage areas and at settlement pond locations identified a number of mitigation/control measures to reduce the potential risk of peat failure. See Appendix 8-1 (Appendix B) of this EIAR for details of the required mitigation/control measures for each infrastructure element.

In summary, the findings of the Geotechnical and Peat Stability Report showed that the Site has an acceptable margin of safety, which is suitable for the Proposed Project and is considered to be at low risk of peat failure provided appropriate mitigation measures, such as implementing and maintaining an

appropriate drainage system are implemented. The findings include recommendations and mitigation/control measures for construction work in peat lands, all of which will be implemented in full to ensure that all works adhere to an acceptable standard of safety.

Please see Chapter 8: Geology and Soils and Appendix 8-1 Geotechnical and Peat Stability Report for more details.

16.3.2 Meteorological

Severe Weather Event

Ireland has a temperate, oceanic climate, resulting in mild winters and cool summers. The Site is located in northwest Mayo, approximately 55 km east of the Atlantic Coastline. The dominant influence on Ireland's climate is the Atlantic Ocean. As a consequence, Ireland does not suffer from the extremes of temperature experienced by many other countries at similar latitude. The hills and mountains, many of which are near the coasts, provide shelter from strong winds and from the direct oceanic influence.

The Met Éireann weather station at Belmullet, Co. Mayo, is the nearest weather and climate monitoring station to the Site that has meteorological data recorded for the 30-year period from 1981-2010. The monitoring station is located approximately 82 kilometres northwest of the site. The wettest months are October and December, and May is usually the driest month. August is the warmest month with a mean daily temperature of 17.8° Celsius.

The windier part of the year lasts for 5.5 months, from 11 October to 27 March, with average wind speeds of more than 28.9 kilometres per hour. The windiest month of the year in Belmullet is January, with an average hourly wind speed of 35.1 kilometres per hour. The calmer time of year lasts for 6.5 months, from 27 March to 11 October. The calmest month of the year in Belmullet is July, with an average hourly wind speed of 22.5 kilometres per hour.

The works programme for the construction stage of the Proposed Project will take account of weather forecasts and work will be suspended in the case of extreme weather events.

The following forecasting and weather warning systems are available and will be used on a daily basis at the Site to direct proposed construction activities, the proposed CEMP will also dictate best practice methods for construction:

- General Forecasts: Available on a national, regional and county level from the Met Éireann website (www.met.ie/forecasts). These provide general information on weather patterns including rainfall, wind speed and direction but do not provide any quantitative rainfall estimates;
- Weather Warning or Advisories: Met Éireann's main suite of warnings are issued by the duty forecaster between 10am and midday and are updated as necessary as new information becomes available. In general, warnings will not be issued more than 60-hours ahead of the expected adverse weather but advisories on potential hazards are issued up to a week in advance. The three warning categories are:
 - Yellow: Not unusual weather. Localised danger.
 - Orange: Infrequent. Dangerous/disruptive.
 - Red: Rare. Extremely dangerous/destructive.
- MeteoAlarm: Alerts to the possible occurrence of severe weather for the next 2 days. Less useful than general forecasts as only available on a provincial scale; 3-hour Rainfall Maps: Forecast quantitative rainfall amounts for the next 3 hours but does not account for possible heavy localised events;
- Rainfall Radar Images: Images covering the entire country are freely available from the Met Éireann website (www.met.ie/latest/rainfall_radar.asp). The images are a composite of radar data from Shannon and Dublin airports and give a picture of

- current rainfall extent and intensity. Images show a quantitative measure of recent rainfall. A 3-hour record is given and is updated every 15 minutes. Radar images are not predictive; and,
- Consultancy Service: Met Eireann provide a 24-hour telephone consultancy service. The forecaster will provide interpretation of weather data and give the best available forecast for the area of interest.

The climate change risk assessments included in the Mayo County Council Climate Action Plan 2024-2029¹³ details the major risks posed from climate change being heatwaves, droughts, cold spells, heavy snowfall, severe windstorms, coastal flooding, coastal erosion, pluvial flooding, river flooding and groundwater flooding. The changes in frequency and intensity of weather patterns as a result of climate change will continue to influence the wide range of functions carried out by the Mayo County Council. The identification of future risks is critical to enable the progression of adaptation and mitigation measures in the development and execution of plans and policies. Please see Section 11.3 in Chapter 11: Climate for further information on the baseline environment and the future environment relative to the Site.

16.3.3 Transport

Road Traffic Collision

As detailed in Chapter 15: Material Assets, the Proposed Project will utilise the M17 Motorway, the N60 national road, the R339 and R336 regional roads, the local road network and the Port of Galway during the construction phase. Construction related traffic will originate from the delivery of materials to site, removal of surplus excavated material from site and transport of employees to, from and throughout the site. The localised traffic disruptions will be mitigated through the use of industry standard traffic management measures. Please see Chapter 15: Material Assets and Appendix 15-2: Traffic Management Plan for details.

Appendix 15-2: Traffic Management Plan (TMP) is provided specifying details relating to traffic management. Prior to the commencement of the construction phase of the Proposed Project, a detailed Traffic Management Plan will be prepared by the Contractor for agreement with the relevant local authorities and An Garda Síochána. The TMP includes requirements for the following:

- Traffic Management Coordinator
- Delivery Programme
- Information to locals
- A Pre and Post Construction Condition Survey
- Liaison with the relevant local authority
- Implementation of temporary alterations to road network at critical locations
- Identification of delivery routes
- Delivery times of large turbine components
- Travel plan for construction workers
- Additional measures
- Re-instatement works

Please see Chapter 15: Material Assets and Appendix 15-2: Traffic Management Plan for details.

¹³ https://www.mayo.ie/getmedia/dfab91e5-939b-41c7-883e-0cee6e359900/139306-Mayo-County-Council-Climate-Action-Plan_2024_V2_Final.pdf

Rail Accident

The Westport-to-Dublin rail line runs approximately 1.5m west of the nearest proposed turbine. The Proposed Project does not physically interact with the railway infrastructure. Nonetheless, during the construction phase, the requirements for third parties as set out in ‘CCE Department Technical Guidance Document CCE-TMS-310 Guidance on Third Party Works’ and ‘CCE Departmental and Multidisciplinary Standard I-DEP-0121 Third Party Works: Additional Details of Railway Safety Requirements’ will be adhered to.

Aircraft Collision/Hull Loss

In order to assess any risk for aircraft collision and hull loss with the Proposed Project, scoping was conducted with relevant aviation consultees to assess any potential risk with the Proposed Project. MKO contacted the relevant national and regional aviation authorities and other relevant consultees in July 2022 as part of the telecommunications and aviation scoping consultation with follow ups in November 2022, between April and July 2023 and a final round of telecommunications and aviation scoping in September 2025. Scoping responses are detailed in Chapter 15 in section 15.2.3. Given that there are no Irish Aviation Authority or Department of Deference assets within the Proposed Wind Farm or surrounding the area there is no potential for impacts. Relevant buffers have been applied to reduce the risk for a major accident during the construction, operation and decommissioning phases of the Proposed Project.

16.3.4 Technological

Oil Pollution

Section 3 of the CEMP sets out details of the environmental controls to be implemented on site. The CEMP provides details on site drainage measures, peat stability monitoring measures, waste management and pollution prevention measures for refuelling and managing hazardous materials and cement-based products. The CEMP also sets out the Emergency Response Procedure to be adopted in the event of an emergency including contamination, health and safety and environmental protection. The CEMP provides details on all mitigation and monitoring measures to be actioned prior to construction as well as during the construction, operation and decommissioning phases. The CEMP will be subject to ongoing review through regular environmental auditing and site inspections during the construction phase. This will confirm the efficacy and implementation of all mitigation measures and commitments identified in the application documentation. Please see Chapter 4 Description and Appendix 4-3 CEMP for details.

During the construction of the Proposed Project, 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) Regulations 2013*’. This will encompass the use of all necessary Personal Protective Equipment and adherence to the site Health and Safety Plan. An Emergency Response Plan (ERP) which will be prepared prior to the construction phase and implemented and adhered to on Site. The ERP provides details of procedures to be adopted in the event of an emergency in terms of Site health and safety and environmental protection. Please see Chapter 4: Description and Appendix 4-3 CEMP for details.

Fire Risk

Lightning conductors will be installed on each turbine as all structures at height require this protection. Turbines specifically require this to prevent power surges to electrical components. Lightning protection conduits will be integral to the construction of the turbines. Lightning conduction cables, encased in protection conduits, will follow the electrical cable run, from the nacelle to the base of the turbine. The

conduction cables will be earthed adjacent to the turbine base. The earthing system will be installed during the construction of the turbine foundations.

Industrial Incident at Seveso Upper Tier site

The Proposed Project is not connected to or in close proximity of any site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations (SEVESO sites), therefore no significant effects associated with major industrial accidents involving dangerous substances are anticipated. Petrochemical fires and fires from fuel emissions, leakages and spillages could occur causing personal injury, structural damage and forest fires.

Loss of Critical Infrastructure

EirGrid operates and develops Ireland's electricity grid. This includes interconnecting to neighbouring grids and running the wholesale electricity market. The grid safely brings power from generators such as wind farms to the ESB network that supplies homes and business in Ireland. It also brings power directly to large energy users. There are two types of electricity generation: synchronous generation and non-synchronous generation. Synchronous generation produces the same amount of electricity all the time e.g. fossil fuels. Non-synchronous generation produces varying amounts of electricity depending on the energy available. Eirgrid operate the grid from National Control Centres (NCCs) in Dublin and Belfast, matching electricity production to customer demand, switching from synchronous to non-synchronous where required to ensure no power outages. Therefore, any technical fault at the Proposed Project will not impact the local or national energy supply.

16.3.5 Civil

Contamination of Water Supply

The Proposed Project has the potential to cause contamination and pollution of groundwater and surface water from the potential release of hydrocarbons, earthworks and excavations on site. Due to the nature of wind farm developments, being near surface construction activities, impacts on groundwater are negligible and surface water is generally the main sensitive receptor assessed during impact assessments. The primary risks to groundwater at the Site would be from cementitious materials, hydrocarbon spillage and leakages, and potential blasting works. These potential significant effects are assessed within Chapter 9: Water. Some of these are common potential impacts on all construction sites (such as road works and industrial sites). All potential contamination sources will be carefully managed at the Site during the construction and operational phases of the development and mitigation measures are proposed within Chapter 9: Water and listed within Chapter 18: Schedule of Mitigation & Monitoring Measures. In addition, a Construction Environment Management Plan (CEMP) has also been prepared in conjunction with the EIAR which details all proposed design and mitigation implemented to reduce the potential impact of construction effects on groundwater and surface water features.

A comprehensive Surface Water Management Plan (Appendix 4-7) has been prepared for the Proposed Project, and this will ensure that surface water runoff from the developed areas of the Site will be of a high quality and will therefore not impact on the quality of downstream rivers and lakes.

16.3.6 Site/Event Specific Emergency Plans for Mayo County Council:

The Major Emergency Plans prepared by Mayo County Council (2021) outlines potential Site/event specific emergency plans which have been considered or ruled out as part of the baseline.

The ‘Flood Emergency Plan’ and ‘Protection of Public Water Supplies’ site/event specific emergency plans for Mayo County Council detail specific measures for procedures around flooding and measures to protect public water supplies within the county. Flooding is already considered under Section 16.3.1 Natural and Public Water Supplies and has been considered above in Section 16.3.5 Civil and is therefore not assessed in this section.

The following Site-Specific Major Emergency Plans prepared by Mayo County Council have also been assessed as part of the baseline;

- Ireland West Airport,
- European Refreshments, Killala Road, Ballina,
- Bellanaboy Bridge Gas Terminal, Bellagelly South, Barnatra, Ballina, and
- McHale Park, Castlebar.

Ireland West Airport has already been addressed in Section 16.3.3. above. The other three sites are SEVESO sites which are not connected to or in close proximity to the Proposed Project, these are discussed in Section 16.3.4. above.

16.4

Risk Assessment

This section outlines the possible risks associated with the Proposed Project for the construction, operational and decommissioning phases.

These risks have been assessed in accordance with the relevant classification as outlined in Table 16-1 and Table 16-2.

The consequence rating assigned to each potential risk assumes that all proposed mitigation measures and safety procedures have failed to prevent the major accident and/or disaster.

16.4.1

Likely Significant Effects

16.4.1.1

Do-Nothing Scenario

If the Proposed Project were not to proceed, the Site will continue to function as it does at present, with no changes to the current land-use.

If the Proposed Project were not to proceed, the opportunity to capture a significant part of County Mayo’s and Ireland’s valuable renewable resource would be lost, as would the opportunity to contribute to meeting Government and EU Targets for the production and consumption of electricity from renewable resources and the reduction of greenhouse gas emissions. The opportunity to generate local employment and investment would also be lost.

16.4.1.2

Assessment of Effects During Construction

A risk register has been developed which contains all potentially relevant risks identified during the construction phase of the Proposed Project. Six risks specific to the construction of the Proposed Project have been identified and are presented in Table 16-5.

Table 16-5 Risk Register - Construction Phase

Risk ID	Potential Risk	Possible Cause
Potential vulnerability to accidents and / or natural disasters		

Risk ID	Potential Risk	Possible Cause
A	Critical Infrastructure Emergencies Risk of delivery of turbines and associated infrastructure to the Site.	Traffic accident during turbine delivery or extreme weather periods of heavy rainfall, taking into account climate change and strong winds.
B	Severe Weather Risk to construction activity on site.	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds.
C	Flooding Risk of flooding in areas surrounding the Site impacting the construction phase and leading to environmental emissions.	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds.
D	Peat Stability Movement of peat within the Site during construction.	Mismanagement of excavated material on site. Severe weather conditions- storm, flooding.
Potential to cause accidents and / or natural disasters.		
E	Traffic Incident Collisions onsite and offsite with vehicles involved in construction of Proposed Project.	Driver negligence or failure of vehicular operations on Proposed Project roads (Proposed Project access roads and public road network). Traffic Management not implemented.
F	Contamination Discharge or spillage of fuel, chemical solvents into watercourse or percolated to groundwater Groundwater and surface water emissions from construction activities. Risk of sediment-laden run off reaching the groundwater system	Accidental fuel spillage during delivery to site. Failure of fuel storage tank or tanks in plant and machinery and vehicles leading to uncontrolled emissions. Drainage and seepage water resulting from infrastructure excavation; Stockpiled excavated material providing a point source of exposed sediment; Construction of the Proposed Project cable trench resulting in entrainment of sediment from the excavations during construction; and, Erosion of sediment from emplaced site drainage channels
G	Fire / Explosion	Equipment or infrastructure failure;

Risk ID	Potential Risk	Possible Cause
		Electrical problems; and Employee negligence.
H	Collapse / damage to structures	Earthquake, land slide, extreme weather events; and Vehicular collisions due to driver negligence on public roads. Traffic Management not implemented.

16.4.1.3 Identification of Effect During Operation

Risks specific to the operation of the Proposed Project have been identified and are presented in Table 16-6.

Table 16-6 Risk Register – Operational Phase

Risk ID	Potential Risk	Possible Cause
Potential vulnerability to accidents and / or natural disasters		
I	Severe Weather Risk to operational activity on site, blade or turbine damage	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds.
J	Contamination Discharge or spillage of fuel, chemical solvents, sewage or wastewater into watercourse or percolated to groundwater.	A vehicular incident on the public road involving fuel, wastewater or sewage transportation in the operational phase. Spill or leak of oil during operational maintenance.
K	Flooding Risk of flooding in areas surrounding the Proposed Project and leading to environmental emissions	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds
Potential to cause accidents and / or natural disasters.		
L	Fire / Explosion	Equipment or infrastructure failure; Electrical problems; and Employee negligence

Risk ID	Potential Risk	Possible Cause
M	Collapse / damage to structures	Earthquake, extreme weather events; and Vehicular collisions due to driver negligence on public roads.
N	Traffic Incident Collisions onsite and offsite with vehicles involved in operation of Proposed Project	Driver negligence or failure of vehicular operations on site roads. Traffic Management not implemented

16.4.1.4 Identification of Effect During Decommissioning

Risks specific to the decommissioning of the Proposed Project have been identified and are presented in Table 16-7.

Table 16-7 Risk Register – Decommissioning Phase

Risk ID	Potential Risk	Possible Cause
Potential vulnerability to accidents and / or natural disasters		
O	Severe Weather Risk to decommissioning activity on site leading to environmental emissions	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds.
P	Flooding Risk of flooding in areas surrounding the Site impacting the decommissioning phase and leading to environmental emissions.	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds.
Potential to cause accidents and / or natural disasters.		
Q	Traffic Incident Collisions onsite and offsite with vehicles involved in construction of Proposed Project	Driver negligence or failure of vehicular operations on site roads. Traffic Management not implemented.
R	Contamination Discharge or spillage of fuel, chemical solvents into watercourse or percolated to groundwater	Accidental fuel spillage during delivery to the Site. Failure of fuel storage tank or tanks in plant and machinery and vehicles leading to uncontrolled emissions.
S	Fire / Explosion	Equipment or infrastructure failure;

Risk ID	Potential Risk	Possible Cause
		Electrical problems; and Employee negligence

These risks have been assessed in accordance with the relevant classification (Refer to Table 16-1 and Table 16-2), and the resulting risk analysis is detailed in Table 16-7: Assessment of Likely Significant Effects

The risk register is based upon possible risks associated with the Proposed Project. The consequence rating assigned to each potential risk assumes that all proposed mitigation measures and safety procedures have failed to prevent the major accident and/or disaster

16.4.1.5 Risk Assessment Summary

Table 16-8: Assessment of Likely Significant Effects contains a risk assessment which has been developed and contains all potentially relevant risks identified during the construction, operation, and decommissioning phases of the Proposed Project. 8 no. risks specific to the construction, operation and decommissioning of the Proposed Project have been identified.

The risk register is based upon possible risks associated the Proposed Project. As outlined in Section 16.2.3.2, the consequence rating assigned to each potential risk assumes that all proposed mitigation measures and safety procedures have failed to prevent the major accident and/or disaster. A summary of the findings can be found in Table 16-9.

16.4.1.6 Assessment of Effect – Summary

Table 16-8 Risk Assessment

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
Construction Phase								
A	Critical Infrastructure Emergencies	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds	Illness or loss of life;	1	The risk of traffic accident during turbine delivery severe weather conditions impacting the identified road network is unlikely when considering the assessment in Chapter 11: Climate (weather conditions recorded over the last 30 years within the area) and Chapter 15: Material Assets, Section 15.1 – Traffic Assessment (turbine delivery occurring during the night, Garda patrolled, etc)	1	The risk of a traffic accident due to severe weather conditions during the construction phase will result in a Very Low Impact in that a ‘ <i>Very low disruption to the delivery of services essential for the maintenance of vital societal functions or economic activities</i> ’ should a severe weather event occur, with ‘ <i>minor injuries only</i> ’.	1
B	Severe Weather	Extreme weather- periods of heavy rainfall, taking into account climate	Illness or loss of life; Damage to, or depletion of	3	The risk of severe weather is unlikely when considering the assessment in Chapter 11: Climate and weather conditions	1	The risk of severe weather conditions during the construction phase will result in a Very Low Impact in that a ‘ <i>very low disruption to</i>	3

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
		change and strong winds.	aquatic habitats and species.		recorded over the last 30 years within the area. All construction works will be paused during a Red Weather Warning as issued by Met Éireann and will not recommence until the weather warning has been lifted and it has been deemed safe to do so.		<i>the delivery of services essential for the maintenance of vital societal functions or economic activities'</i> should a severe weather event occur, with ' <i>minor injuries only</i> ' Severe weather may cause increased mobilisation of sediment or ' <i>simple localised contamination</i> ' which will be controlled via the Proposed Project design and mitigation measures.	
C	Flooding	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds	Illness or loss of life; Groundwater Flooding; Flooding to surrounding properties;	2	The risk of flooding is considered very unlikely when taking into account the assessment in Chapter 9: Water of the EIAR, the raising of infrastructure in flood zones to above flood zone level and the implementation of a bespoke drainage design plan for the project.	1	The risk of flooding during the construction phase will result in a Very Low Impact . There will be a ' <i>limited disruption to community</i> ' should a severe weather event occur, with ' <i>minor injuries only</i> '. injuries with first aid treatment'.	2

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
			Damage to, or depletion of aquatic habitats and species.				Flooding has the potential to cause increased sediment mobilisation however flooding is not anticipated and should any flooding occur, it would be localised.	
D	Peat Stability	Mismanagement of excavated material on site. Extreme weather conditions.	Movement of peat within the Site; Sedimentation of nearby watercourse; and Damage to, or depletion of aquatic habitats and species.	2	The Proposed Project has been designed to minimise the potential for peat instability and failure. Refer to Appendix 8-1: Geotechnical and Peat Stability Report.	2	The risk of peat instability during the construction phase will result in a Low Impact in that there would be <i>‘Simple, regional contamination, effects of short duration’</i> . Simple contamination of environment (e.g. watercourses, aquatic habitats and associated species), localised effects of short duration.	4
E	Traffic Incident	Driver negligence or failure of	Injury or loss of life.	3	Chapter 15: Material Assets of this EIAR, Section 15.1 details traffic	1	A Very Low Impact is predicted for traffic incidents. Having regard	3

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
		vehicular operations on site roads (Proposed Project access roads and public road network). Driver negligence or failure of vehicular operations on public road network (turbine component deliveries/ other infrastructure deliveries/ staff vehicles). Traffic Management not implemented.			movements which relate to the Construction Phase of the Proposed Project. The Traffic Management Plan included as Appendix 15-1 details proposals for traffic movements entering and leaving the Site, and within the internal access roads. The internal road network within the Proposed Wind Farm has been designed to allow for 2 vehicles to pass on the road, and/or in passing bays, which will reduce the likelihood of a traffic incident or collision occurring within the Proposed Wind Farm. There will also be a speed limit imposed on the internal Proposed Wind Farm road network, which will also reduce the likelihood of any traffic incident or collision.		to on-site speed limits and vehicular movements, there would be <i>‘Serious injuries less than 1 in 100,000’</i> should a vehicular collision occur.	

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
					As such, it can be determined that there is some ‘opportunity, reason or means’ for a vehicle collision to occur on site or public roads, ‘at some time.’ An unlikely risk is therefore predicted. Staff will be trained/toolbox talks highlighting construction entrances and proper access and egress procedures.			
F	Contamination – Fuel storage and handling - General Construction	Fuel spillage during delivery to Site. Failure of fuel storage tank or tanks in plant and machinery and vehicles. Drainage and seepage water	Release of suspended solids to groundwater. Contamination of local drinking water supplies and groundwater aquifers.	2	As outlined in Chapter 4: Description of the Proposed Project, fuel storage and re-fuelling plant and machinery will be managed on-site to ensure containment and prevent spillages of fuel. No fuels, chemicals or solvents will be stored outside of the confines of the Site.	2	The risk of a fuel spillage at the Site causing a significant environmental effect is a Low Impact taking all and best practice measures proposed into account. There would be ‘<i>Simple, regional contamination, effects of short duration</i>’	4

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
		resulting from infrastructure excavation. Stockpiled excavated material providing a point source of exposed sediment.	Groundwater and surface water emissions from construction activities. Accidental spillage during refuelling.		Setback distances from sensitive hydrological features means that adequate room is maintained for the proposed drainage mitigation measures as detailed in Chapter 9: Water. Detailed mitigation measures and methodologies for the control of sediment Proposed Grid Connection works as described in the EIAR. Standard and specific mitigation to prevent accidents and indirect effects of accidents are included in the Proposed Project design and will be implemented.			
G	Fire / Explosion	Equipment or infrastructure failure;	Illness or loss of life;	2	As outlined in Chapter 4: Description of the Proposed Project, fuel stored onsite during the	2	Should a fire/explosion occur at the Site, a Low Impact would apply in that there would be	4

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
		Fuel spillage/storage; Electrical problems; Employee negligence; Disturbance of underground Gas Networks Ireland Pipeline.	Damage to, or depletion of habitats and species; Impacts on ambient air quality; Fire and explosion.		construction phase of the Proposed Project will be stored in bundled areas. Therefore, fuel leakage/spillage is not considered to be a significant fire risk. In accordance with Chapter 19 of the Safety, Health and Welfare at Work Act 2005 (the 2005 Act), the Proposed Project shall be subject to a fire safety risk assessment which would assist in the identification of any major risks of fire on site, and mitigation of the same during operation. Interaction of the Proposed Project with the GNI network has been informed by consultation with GNI and has been designed in accordance with the GNI Code of Practice.		<i>‘Community functioning with considerable inconvenience’</i> due to the nature of the Proposed Project and the lack of infrastructure or fuel storage during operation that would result in any such incident.	

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
H	Collapse / damage to structures	Vehicular collisions due to driver negligence on public roads; and Earthquakes, extreme weather events.	Injury or loss of life.	1	According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are “normal” in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, buildings in Ireland are extremely unlikely to be damaged or collapse due to seismic activity. As outlined in Chapter 11: Climate of this EIAR, due to Ireland’s latitudinal position, the probability of extreme weather events posing a threat to human life are low. However, in the circumstance of such a weather event occurring at the Site during the construction phase, the	1	The risk of infrastructure collapse during the construction phase will result in a Very Low Impact in that there would be ‘<i>Serious injuries less than 1 in 100,000</i>’, ‘<i>Limited disruption to community</i>’ and no real likelihood of any impact on any environmental receptors.	1

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
					Severe Weather Plan as set out in Section 11 of the Mayo County Major Emergency Plan will be followed. Having regard to speed limits within the Site, it is not predicted that any collision of vehicles and any infrastructure would result in significant damage/collapse.			
Operational Phase								
I	Severe Weather	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds	Illness or loss of life;	3	The risk of severe weather is unlikely when considering the assessment in Chapter 11: Climate and weather conditions recorded over the last 30 years within the area.	1	The risk of severe weather conditions during the operational phase will result in a Very Low Impact in that a ' <i>Serious injuries less than 1 in 100,00</i> ' would occur should a severe weather event occur.	3
J	Contamination	A vehicular incident on the public road or	Damage to, or depletion of	2	As outlined in Chapter 9: Water, Section 9.5.2 fuels stored on site will be	1	The risk of a fuel spillage or impact on surrounding drainage	2

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
		Proposed Project road network involving fuel, wastewater or sewage transportation in the operational phase.	aquatic habitats and species. Contamination of local drinking water supplies, Group Water Schemes, and groundwater aquifers.		minimised and any hydrocarbons stored on-site will be banded to 110% of the storage tanks maximum capacity		during the operational stage will result in a Very Low Impact in that there would be ' <i>Simple localised contamination</i> ' with ' <i>Limited disruption to community</i> ', through the use of banded containment areas during operation. The potential residual environmental effects are described in detail in Chapter 9 which concludes that there will be no significant environmental effects.	
K	Flooding	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds	Illness or loss of life; Groundwater Flooding; Flooding to surrounding properties; Damage to, or depletion of	2	As detailed in Appendix 9-1, Flood Risk Assessment (FRA), a flood risk identification study was undertaken to identify existing potential flood risks associated with the Proposed Project. The overall risk of flooding posed by the Proposed Project is low. The main	1	The risk of flooding during the operational phase will result in a Very Low Impact in that there would be a ' <i>Limited disruption to community</i> ' should a severe weather event occur. With ' <i>Minor injuries only</i> '.	2

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
			aquatic habitats and species.		risk of flooding on site is from fluvial flooding.			
L	Fire / Explosion	Equipment or infrastructure failure; Fuel spillage/storage; Electrical problems; and Employee negligence.	Illness or loss of life; Damage to, or depletion of habitats and species; and Impacts on ambient air quality.	2	There is a possibility of equipment failure during the operational phase of the Proposed Project. The proposed turbines have an operational life of approximately 35 years, but components may need to be replaced before this period has passed. The onsite 110kV substation will need maintenance. In accordance with Chapter 19 of the Safety, Health and Welfare at Work Act 2005 (the 2005 Act), the Proposed Project shall be subject to a fire safety risk assessment which would assist in the identification of any major risks of fire on site, and mitigation of the same during operation.	2	Should a fire/explosion occur at the Site there would be a Low Impact in that there would be ‘<i>Community functioning with considerable inconvenience</i>’ due to the nature of the Proposed Project and the lack of infrastructure or fuel storage during operation that would result in any such incident.	4

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
M	Collapse/ damage to structures	Vehicular collisions due to driver negligence on public roads; and Earthquakes, extreme weather events.	Injury or loss of life.	1	According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are “normal” in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, buildings in Ireland are extremely unlikely to be damaged or collapse due to seismic activity. As outlined in Chapter 11: Climate of this EIAR, due to Ireland’s latitudinal position, the probability of extreme weather events posing a threat to human life are low. However, in the circumstance of such a weather event occurring at the site of the Proposed Project during the	1	The risk of infrastructure collapse during the operational phase will result in a minor consequence in that a ‘small number of people would be affected’ and no real likelihood of any impact on any environmental receptors. In the event of severe weather, all stipulations outlined in the Severe Weather Plan will be followed explicitly.	1

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
					operational phase, the Severe Weather Plan as set out in Section 11 of the Mayo County Major Emergency Plan will be followed. Having regard to speed limits within the Proposed Project, it is not predicted that any collision of vehicles and any infrastructure would result in significant damage/collapse.			
N	Traffic Incident	Driver negligence or failure of vehicular operations on Proposed Project roads. Traffic Management not implemented.	Injury or loss of life.	3	A very low number of vehicles will access the Proposed Wind Farm as part of the operational phase. As such, it can be determined that there is some 'opportunity, reason or means' for a vehicle collision to occur within the Proposed Wind Farm,	1	A Very Low Impact is predicted. Having regard to on-site speed limits and vehicular movements, there would be ' <i>Serious injuries less than 1 in 100,000</i> ' should a vehicular collision occur.	3

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
					‘at some time.’ An unlikely risk is therefore predicted.			
Decommissioning Phase								
O	Severe Weather	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds.	Illness or loss of life; Damage to, or depletion of aquatic habitats and species.	3	The risk of severe weather is unlikely when considering the assessment in Chapter 11: Climate and weather conditions recorded over the last 30 years within the area. Decommissioning works will be paused should a Status Red weather warning alert be issued by Met Eireann as is standard practice	1	The risk of severe weather conditions during the decommissioning phase will result in a Very Low Impact in that a ‘ <i>Limited disruption to community</i> ’ should a severe weather event occur, with ‘ <i>Minor injuries only</i> ’ Decommissioning will not require significant excavations works. There is no likelihood of any impact on any environmental receptors.	3
P	Flooding	Extreme weather- periods of heavy rainfall, taking into account climate	Illness or loss of life; Groundwater Flooding;	2	The risk of flooding is considered to be low when taking into account the assessment in Chapter 9: Water of the EIAR.	1	The risk of flooding during the decommissioning phase will result in a Very Low Impact in that a ‘ <i>Limited disruption to community</i> ’	2

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
		change and strong winds.	Flooding to surrounding properties; Damage to, or depletion of aquatic habitats and species.				should a severe weather event occur, with ' <i>minor injuries only</i> '.	
Q	Traffic Incident	Driver negligence or failure of vehicular operations on site roads. Traffic Management not implemented.	Injury or loss of life.	3	Traffic movements associated with the decommissioning phase of the Proposed Project will be limited to Heavy Goods Vehicles (HGVs) needed for the decommissioning works, and Light Goods Vehicles (LGVs) needed to transport construction staff to the Site. As such, it can be determined that there is some 'opportunity, reason or means' for a vehicle collision to occur on site, 'at some time.' An unlikely risk is therefore predicted.	1	A Very Low Impact is predicted. Having regard to on-site speed limits and vehicular movements, a ' <i>serious injuries less than 1 in 100,00</i> ' should a vehicular collision occur.'	3

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
R	Contamination	Fuel spillage during delivery to the Site. Failure of fuel storage tank or tanks in plant and machinery and vehicles.	Damage to, or depletion of aquatic habitats and species; Discharge to groundwater.	2	As outlined in Chapter 4: Description of the Proposed Project, fuel will be stored on site but in a bunded area to ensure containment and prevent spillages of fuel. No fuels, chemicals or solvents will be stored outside of the confines of the Site. Setback distances from sensitive hydrological features means that adequate room is maintained for the proposed drainage measures as detailed in Chapter 9: Water.	2	The risk of a fuel spillage or impact on surrounding drainage during the decommissioning stage will result in a Low Impact in that there would be ‘<i>Simple, regional contamination, effects of short duration</i>’ through the use of bunded containment areas during decommissioning. The potential residual environmental effects are described in detail in Chapter 9 which concludes that there will be no significant environmental effects ‘Should impacts to drinking water occur as a result of decommissioning activities at the Site, There would be a Low	4

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
							Impact in that there would be ‘ <i>Limited disruption to community</i> ’ with <i>Simple localised contamination</i> ’ due to the nature of the Proposed Project and the proposed mitigation.	
S	Fire / Explosion	Equipment or infrastructure failure; Fuel spillage/storage; Electrical problems; and Employee negligence.	Illness or loss of life; Damage to, or depletion of habitats and species; and Impacts on ambient air quality.	2	In accordance with Chapter 19 of the Safety, Health and Welfare at Work Act 2005 (the 2005 Act), the Proposed Project shall be subject to a fire safety risk assessment which would assist in the identification of any major risks of fire on site, and mitigation of the same during operation.	2	Should a fire/explosion occur at the Site during decommissioning works, a limited consequence in that there would be ‘a limited number of people affected’ with ‘localised effects of short duration’ on people and environmental receptors due to the nature of the Proposed Project. There will be ‘normal community functioning’ in the area with ‘some inconvenience’. The ‘generic command, control & co-ordination systems’ as well as the ‘common elements of	4

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Impact Rating	Basis of Impact	Risk Score (Impact x Likelihood)
							response' detailed in the Mayo County Council Major Emergency Plan will work to reduce the consequence (both on people and the environment) of potential fire/explosions at the Site.	

The risk assessment for each of the potential risks identified are consolidated in Table 16-9 which provides their ‘risk score.’ A corresponding risk matrix is provided in Table 16-10, which is colour coded in order to provide an indication of the critical nature of each risk. As outlined in Section 16.2.3.2, the red zone represents ‘high risk’ scenarios’, the amber zone represents ‘medium risk scenarios and the green zone represents ‘low risk scenarios.

Table 16-9 Risk Scores

Risk ID	Potential Risk	Likelihood Rating	Impact Rating	Risk Score
Construction Phase				
A	Critical Infrastructure Emergencies	1	1	1
B	Severe Weather	3	1	3
C	Flooding	2	1	2
D	Peat Stability	2	2	4
E	Traffic Incident	3	1	3
F	Contamination	2	2	4
G	Fire/ Explosion	2	2	4
H	Collapse/ damage to structures	1	1	1
Operational Phase				
I	Severe Weather	3	1	3
J	Contamination	2	1	2
K	Flooding	2	1	2
L	Fire/ Explosion	2	2	4
M	Collapse/ Damage to Structures	1	1	1
N	Traffic Incident	3	1	3
Decommissioning Phase				
O	Severe Weather	3	1	3
P	Flooding	2	1	2
Q	Traffic Incident	3	1	3
R	Contamination	2	2	4
S	Fire / Explosion	2	2	4

Table 16-10 Risk Matrix

		Consequence Rating				
		1.Very Low	2.Low	3. Moderate	4. High	5. Very High
Likelihood Rating	5. Very Likely					
	4. Likely					
	3. Unlikely	B, E, I, N, O, Q				
	2. Very Unlikely	C, J, K, P	D, F, G, L, R, S			
	1. Extremely Unlikely	A, H, M				

Table 16-10, presents the potential risks identified during the construction, operation and decommissioning of the Proposed Project all of which can be classified as ‘low risk scenarios.’ On this basis none of the assessed risks have the potential to have a significant effect on the environment. Therefore, the overall effect is **Not Significant**.

The scenarios with the highest risk score (risk scores of 4 or higher) in terms of a major accident and/or natural disaster during the construction, operation and decommissioning phase of the Proposed Project are identified below. It should be noted that specific mitigation measures are proposed for the lower risk score scenarios (risk score of 3 or below) and are described in detail in their relevant chapters.

16.4.1.7 Peat Stability During Construction (D)

There is a potential risk of peat instability during the construction phase of the Proposed Project. The risk of peat instability was given a risk score of 4. The risk of peat instability has been minimised through the careful design of the Proposed Project and will be further limited through the implementation of the best practice construction control measures outlined in Appendix 8-1 of the EIAR.

The risk of peat instability is ‘very unlikely’ to occur and will have ‘limited’ consequences should it do so, representing a ‘low-risk scenario’ during the construction phase. Therefore, there will be no significant effect.

16.4.1.8 Contamination During Construction and Decommissioning (F, R)

There is a potential risk of contamination from site activities during the construction and decommissioning phases from potential release of hydrocarbons. The risk of contamination was given a risk score of 4 for the construction and decommissioning phases on a precautionary basis. However, as outlined in Chapter 8: Land, Soils and Geology, Section 8.6, and Chapter 9: Water, Section 9.5, measures will be implemented to reduce the risk of accidental spillage and contamination of pollution risk to soils, groundwater, surface water and associated ecosystems, and to terrestrial ecology.

The risk of contamination is ‘very unlikely’ to occur and will have ‘limited’ consequences should it do so, representing a ‘low-risk scenario’ during the construction and decommissioning phases.

The conclusions in the relevant chapters of the EIAR state that there will be no significant residual effects associated with this potential impact.

16.4.1.9 **Fire/ Explosion During Construction, Operation and Decommissioning (G, L, S)**

There is a potential risk of fire/explosion at the Site. However, as outlined in Section 16.2.1, the scope of this assessment has been based on the understanding that the Proposed Project will be designed, built and operated in line with current best practice. It is considered that the risk of significant fire occurring, impacting the proposed project and causing it to have significant environmental effects is limited. The rigorous safety checks imposed on turbines and associated infrastructure during design, construction, commissioning, and operation ensures the risks to humans are negligible.

Further, in accordance with Chapter 19 of the Safety, Health and Welfare at Work Acts 2005 to 2014, the Proposed Project shall be subject to a fire safety risk assessment which will assist in the identification of any major risks of fire on the Site, and mitigation of the same during operation. Therefore, there will be no significant effects.

16.4.2 **Mitigation Measures**

As outlined in Section 16.4.1, the scenarios with the highest risk score in terms of the occurrence of major accident and/or disaster were identified as 'Contamination' during the construction and decommissioning phases, 'Industrial Accident- Fire' during the construction, operation and decommissioning phases and 'Peat Stability' during the construction phase.

The Proposed Project has been designed and will be built in accordance with the best practice measures set out in this EIAR and, as such, mitigation against the risk of major accidents and/or disasters is embedded through the design. In accordance with the provision of the European Commission 'Guidance on the preparation of Environmental Impact Assessment Reports', a Risk Management Plan (RMP) will be prepared and implemented on site to ensure an effective response to disasters or the risk of accidents. The RMP will include sufficient preparedness and emergency planning measures.

The construction, operation and decommissioning of the Project shall be managed in accordance with the Safety, Health and Welfare at Work Act 2005 (as amended), the Safety, Health and Welfare at Work (General Application) Regulations 2007 (as amended), and the Safety Health and Welfare at Work (Construction) Regulations 2013 (as amended).

As required under the Safety, Health and Welfare at Work (Construction) Regulations 2013, the Developer shall appoint a Project Supervisor for the Design Process (PSDP) and a Project Supervisor for the Construction Stage (PSCS). The PSDP shall compile a Preliminary Safety and Health Plan (PSHP), which details general information about the Project and envisaged health and safety risks. The PSHP shall be made available to the PSCS. The PSCS shall develop a Construction Stage Health and Safety Plan (CSHSP) which incorporates the information contained in the PSHP and details how safety and health will be managed during the construction of the Project. The PSCS will implement the following documents during the pre-construction and construction stage of the Project: CEMP (Appendix 4-5) and the Surface Water Management Plan (Appendix 4-7).

16.4.2.1 **Mitigation - Peat Stability During Construction (D)**

The findings of the Geotechnical & Peat Stability Report (Appendix 8-1) showed that the Site has an acceptable margin of safety, is suitable for the Proposed Project and is considered to be at low risk of peat failure. The findings include recommendations and control measures for construction work in

peatlands to ensure that all works adhere to an acceptable standard of safety. These measures are summarised below and further detailed in Appendix 8-1:

Detailed ground investigation to confirm peat, mineral soil and bedrock condition and properties.
Use of experienced geotechnical staff for confirmatory site investigation.
Maintain hydrology of area as far as possible by maintaining the flow of water in existing drains to prevent the build-up of water pressures in the peat, leading to the peat becoming “buoyant”.
Use of contractors with experience in working peat and trained operators to carry out the work.
Use of floating roads in deeper areas of peat.
Movement monitoring posts to be installed upslope of the turbine/hardstand excavation and monitored on a regular basis.

16.4.2.2 **Mitigation - Contamination During Construction and Decommissioning (F, R)**

Potential effects associated with contamination during construction, operation and decommissioning are addressed fully in Chapter 8: Land, Soils and Geology and Chapter 9: Water. The mitigation measures outlined in Chapter 8 and 9 to protect environmental receptors as well as the procedures and measures described in the CEMP will ensure that the risk from these sources is low.

A CEMP has been prepared for the Proposed Project and is included in Appendix 4-5 of this EIAR. Upon a grant of planning permission for the Proposed Project, the CEMP will be updated to reflect the conditions stipulated in any planning consent prior to the commencement of the development. The CEMP will be a live document maintained by the contractor that will work to ensure that potential risks of major accident and/or disaster are identified, avoided and mitigated, as necessary. Refer to Appendix 4-5 for the CEMP that sets out the minimum standards to be employed by the contractor.

All mitigation measures proposed as part of this project are also listed in Chapter 18: Schedule of Mitigation and Monitoring Measures.

16.4.2.3 **Mitigation - Fire During Construction, Operation and Decommissioning (G, L, S)**

As outlined in Section 4.4 of Chapter 4: Description of the Proposed Project of the EIAR, the CEMP will be reviewed and updated prior to the commencement of any works. The CEMP will be a live document maintained by the contractor that will work to ensure that potential risks of major accident and/or disaster are identified, avoided and mitigated, as necessary. Refer to Appendix 4-5 for the CEMP that sets out the minimum standards to be employed by the contractor.

All mitigation measures proposed as part of this project are also listed in Chapter 18: Schedule of Mitigation and Monitoring Measures.

16.4.3 **Residual Effects**

The risk of a major accident and/or disaster during the construction of the Proposed Project is considered ‘low’ in accordance with the ‘*Guide to Risk Assessment in Major Emergency Management*’ (DoEHLG, 2010).

It is considered that when the above mitigation, and all mitigation outlined in the EIAR are implemented, there will not be significant residual effects associated with the construction, operation and decommissioning of the Proposed Project.

16.4.1 Monitoring

16.4.1.1 Monitoring During Construction

As outlined in Section 4.4 of Chapter 4: Description of the Proposed Project of the EIAR, the CEMP will be reviewed and updated prior to the commencement of any works. The CEMP will be a live document maintained by the contractor that will work to ensure that potential risks of major accident and/or disaster are identified, avoided and mitigated, as necessary. Refer to Appendix 4-5 for the CEMP that sets out the minimum standards to be employed by the contractor.

All monitoring measures proposed as part of this project are also listed in Chapter 18: Schedule of Mitigation and Monitoring Measures.

16.4.1.2 Monitoring During Operation

The operator of the Proposed Project will continue to assess the risk of major accidents and/or disasters on Site on an on-going basis during operation. This is further discussed in Section 16.4.2. above.

The maintenance programme, record of reported incidents, as well as general site activities will be monitored on an on-going basis to ensure risk of major accidents does not increase over time.

16.4.1.3 Monitoring During Decommissioning

As outlined in Section 4.11 of Chapter 4: Description of the Proposed Project of the EIAR, a Decommissioning Plan has been prepared (Appendix 4-6) the final detail of which will be agreed with the local authority prior to any decommissioning works commencing. The Decommissioning Plan will be updated prior to the end of the operational period in line with decommissioning methodologies that may exist at the time and will be finalised with the competent authority at that time. The Decommissioning Plan includes mitigation and monitoring measures that will be in place during the decommissioning phase. These can also be found in a Chapter 18 which sets out all proposed Mitigation and Monitoring Measures for all three phases of the Proposed Project.

16.4.2 Assessment of Cumulative Effects and In Combination Impacts

A search in relation to plans and projects that may have the potential to result in a cumulative impact with the Proposed Project on the environment was carried out as part of the EIAR. The Proposed Project has been considered, in combination with existing, permitted and proposed plans and projects (wind energy or otherwise), set out in Chapter 2, Section 2.9 of the EIAR.

All elements of the Proposed Project were assessed to identify any cumulative effects. A wind farm including all its various components including the grid connection works, substation, roads, turbines etc is not a recognised source of pollution. It is not subject to Industrial Emissions Directive regulation or any other Environmental Protection Agency environmental regulatory consent. Should a major accident or natural disaster occur the potential sources of pollution onsite during the construction, operational and decommissioning phases are limited and of low environmental risk. Sources of pollution with the potential to cause significant environmental pollution and associated negative effects such as bulk storage of hydrocarbons or chemicals, storage of wastes, management of flammable materials etc. are limited and so there is an inherent low level of environmental risk associated with major accident or natural disaster.

There is low potential for significant natural disasters to occur at the Site. Ireland is a geologically stable country with a mild temperate climate. The potential natural disasters that may occur are therefore

limited and these have been assessed in the context of the Proposed Project, cumulatively in this chapter and in the wider EIAR.

Major industrial accidents involving dangerous substances pose a significant threat to humans and the environment; such accidents can give rise to serious injury to people or serious damage to the environment, both on and off the site of the accident. The Proposed Project is not regulated or connected to or close to any site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations i.e., SEVESO sites and so there are no potential effects from this source. There is no real likelihood of significant environmental effects cumulatively associated with major accidents.

The Proposed Project has low potential to cause natural disasters or major accidents. The majority of the Site is on cutover peat, with appropriate control/ mitigation measures implemented, there is low potential for peat slides or landslides. Any risks associated with flooding, impacts on infrastructure, accidents etc are addressed in the sections above. There is no real likelihood of significant environmental effects cumulatively associated with the Proposed Project's potential to cause accidents or natural disasters.

Following a detailed assessment of the potential for any further impact when considering the Proposed Project cumulatively with any or all of the projects listed in Appendix 2-3, the Proposed Project, with mitigation measures in place, and when combined with the cumulative projects as listed in Appendix 2-3 would not result in any cumulative effects. This is Not Significant.