

16.

MAJOR ACCIDENTS AND NATURAL DISASTERS

16.1

Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) describes the likely significant effects on the environment arising from the vulnerability of the Prospective Development as detailed in Chapter 4 Description of the Prospective Development, to risks of major accidents and/or natural disasters, as well as the potential of the Prospective Development itself to cause potential major accidents and/or natural disasters.

This assessment 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) (hereafter referred to as the EPA Guidelines), 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’ (EU 2017) and the ‘Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment’ (DHPLG, 2018).

As detailed in Section 1.1.1 in Chapter 1 of this EIAR, the various development components are described and assessed using the following references: ‘Subject Development’, ‘Existing Development’, ‘Prospective Development’, ‘Permitted Development’, ‘Site’, ‘Wind Farm Site’, ‘Grid Connection Site’, ‘BMEP Site’, ‘Grid Connection’, ‘November 2020 Peat Slide’, ‘2017 EIAR’ and ‘proposed turbines’.

Major accidents or natural disasters are hazards which have the potential to affect the Prospective Development and lead to environmental effects directly or indirectly or the potential the Prospective Development has to cause environmental effects. These include accidents during construction, operation and maintenance, and decommissioning of the Prospective Development, caused by operational failure and/or natural hazards. The assessment of the vulnerability of the Prospective Development to major accidents and/or natural disasters, as well as the risk of the Prospective Development 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 effects 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 Prospective Development;

“because of their vulnerability to major accidents and/or natural disasters (such as flooding, sea level rise, or earthquakes), 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 Prospective Development 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.

The assessment of the risk of major accidents and/or natural disaster is considered in relation to the information required to be provided in both this EIAR and the rEIAR, i.e. Chapter 5 Population and

Human Health, Chapter 6 Biodiversity, Chapter 8 Land, Soil and Geology, Chapter 9 Hydrology and Hydrogeology, Chapter 10 Air Quality, Chapter 11 Climate, Chapter 13 Landscape and Visual, Chapter 14 Cultural Heritage, and Chapter 15 Material Assets of this EIAR.

16.1.1 Statement of Authority

This section of the EIAR has been prepared by Robert Kennedy and Keelin Bourke and reviewed by Sean Creedon, all of MKO.

Robert is a Project Environmental Scientist working as part of MKO's Renewables Team, with four years of experience in private consultancy. Robert holds a BSc in Environmental Biology and an MSc in Environmental Policy, both from University College Dublin. Robert's key strengths and areas of expertise are in project management, environmental impact assessment reporting, renewable energy, report writing, and research. Since joining MKO in 2022, Robert has worked with and coordinated large multi-disciplinary teams involved in the production of EIARs for large-scale renewable energy developments. Robert's experience spans a broad range of wind energy developments, including applications for new onshore and offshore wind farms, repowering and lifetime extension projects, and substitute consent. Robert also played a role in developing MKO's new service offering around Biodiversity Net Gain and other nature-positive mechanisms.

Keelin is an Environmental Scientist with MKO, with over 2 years' experience in private consultancy. Keelin holds a BSc (Hons) in Environmental Science from University College Cork and an MSc (Dist) in Environmental Engineering from Trinity College Dublin. Keelin's key strengths and areas of expertise are in project management, environmental mapping, environmental surveying, and environmental report writing. Keelin has experience in preparing environmental impact assessment reports of a broad range of topics, including population and human health assessments, air quality assessments, assessments of built services and infrastructure and major accidents and natural disaster risk assessments for both onshore and offshore wind energy projects. Keelin has been involved in preparing and managing Environmental Impact Assessments and in leading large multi-disciplinary teams in order to produce robust Environmental Impact Assessment Reports for large-scale onshore and offshore wind energy developments.

Sean Creedon is an Associate Director in the Environment Team at MKO. He leads a team of highly skilled environmental professionals working on EIAR for large-and medium scale Renewable Energy infrastructure. Sean has directed and overseen multiple renewable energy projects across wind, solar, battery, biogas and hydrogen as well as a range of thermal and other energy related developments. He has worked on the planning and environmental impact elements within all stages of wind farm project delivery. Sean's professional experience includes the development and management of a portfolio of wind farm developments to the consenting decision. He is a member of the MKO senior management team. Sean has over 24 years' experience in program and project development, holds an MSc from NUI Galway and a Diploma in Project Management from Institute of Project Management Ireland.

16.1.2 Scoping and Consultation

Chapter 2 of this EIAR describes the scoping and consultation exercise undertaken for the Subject Development. Scoping was originally conducted for the Subject Development in September 2025, due to the time that had passed and updates which were made as the design progressed, a further follow up round of Scoping occurred in March 2026 to all consultees which were originally contacted. Relevant to this chapter, responses were received from the Health Service Executive (HSE), Fáilte Ireland, Department of Agriculture, Environment and Rural Affairs (DAERA -Northern Ireland) and the Geological Survey Ireland (GSI).

Health Services Executive (HSE)

A scoping response was received from the Health Service Executive (HSE) on the 3rd October 2025. The HSE responded to the follow up round of scoping in March 2026 to state that they had no further comments. The HSE noted that the assessment should include the impact construction work may have on the future stability of ground conditions, taking into consideration extreme weather events, site drainage, and the potential for soil erosion. The HSE stated that a Construction Environmental Management Plan (CEMP) should be included which details dust control and mitigation measures. The HSE recommends a peat stability monitoring programme as set out in the Scottish Government's 'Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Developments 2017'. The HSE further stated that the EIAR should examine all likely significant impacts and provide the following information for each:

Table 16-1 Topics to be discussed as per HSE Scoping Response relevant to this chapter

Topic	Location in rEIAR
Description of the receiving environment;	Relevant sections of this EIAR and the rEIAR Chapter 3 to Chapter 18 Inclusive
The nature and scale of the impact;	Relevant sections of this EIAR and the rEIAR Chapter 3 to Chapter 18 Inclusive
An assessment of the significance of the impact;	Relevant sections of this EIAR and the rEIAR Chapter 3 to Chapter 18 Inclusive
Proposed mitigation measures;	Relevant sections of this EIAR and the rEIAR Chapter 3 to Chapter 18 Inclusive
Residual impacts.	Relevant sections of this EIAR and the rEIAR Chapter 3 to Chapter 18 Inclusive

Fáilte Ireland

A scoping response was received from Fáilte Ireland on the 21st October 2025, who provided a copy of 'Fáilte Ireland's Guidelines for the Treatment of Tourism in an EIA 2023', to inform the preparation of the EIAR for Subject Development. The report provides guidance for those conducting EIA and compiling an EIAR, or those assessing EIARs, where the project involves tourism or may have an impact upon tourism, which states that it is a;

'requirement for tourist developments to describe expected significant effects on the environment of the proposed development's vulnerability to major accidents and/or natural disasters relevant to it. Where appropriate measures should be identified to prevent or mitigate the significant adverse effects of such accidents or disasters, including resulting from climate change, on the environment and detail the preparedness for the proposed response.'

The potential major accidents and associated significant effects that could occur due to the Subject Development are discussed in section 16.4 of this EIAR and the rEIAR. Mitigation measures in place at the Site are discussed in section 16.4.2 of this EIAR and the rEIAR. An Emergency Response Plan can be found in Appendix 4-3 CEMP of this EIAR and Appendix 4-3 2019 CEMP of the rEIAR.

Department of Agriculture, Environment and Rural Affairs (DAERA)

The Nature Environment Division (NED) of the DAERA in Northern Ireland responded to a scoping request on the 3rd October. On the 27th of March 2026 in response to the follow up scoping conducted in March 2026, DAERA stated that they had no further comments. The response flagged the presence of salmon records within the development site and the closest record within the River Foyle and Tributaries Special Area of Conservation (SAC) and Area of Special Scientific Interest (ASSI), is 3.6km downstream. The habitats within the River Foyle system that could potentially be affected by the development are salmon nursery, holding and spawning habitats. The development could cause permanent loss or fragmentation to habitats. Excess sediment can smother spawning habitats, reducing

habitat quality and reduction in food species. NED state that a peat slide or construction related hydrocarbon run off/ incidents could result in significant sediment mobilisation, resulting in sedimentation of downstream waterbodies. The recommendations from the NED are included in Table 16-2 below.

Table 16-2 Topics to be discussed as per DAERA Scoping Response relevant to this chapter

Topic		Location in EIAR/rEIAR
An outline Construction Environmental Management Plan (oCEMP) which should identify potential risks to the aquatic environment, potential pollution pathways, and mitigation measures to negate such risks. The oCEMP should include:	Construction Method Statement(s)	Section 4.9 Chapter 4 Description of the Prospective Development of this EIAR, Section 4.9 Chapter 4 Description of the Existing Development of the rEIAR, Appendix 4-3 CEMP of the EIAR, Appendix 4-3 2019 CEMP of the rEIAR
	Pollution Prevention Plan,	Appendix 4-3 CEMP of the EIAR, Appendix 4-3 2019 CEMP of the rEIAR
	Site Drainage Plan, including details of Sustainable Drainage Systems (SuDS),	Section 4.5 Chapter 4 Description of the Prospective Development of this EIAR, Section 4.5 Chapter 4 Description of the Existing Development of the rEIAR, Appendix 4-3 CEMP of the EIAR, Appendix 4-3 2019 CEMP of the rEIAR
	Environmental Emergency Plan,	Appendix 4-3 CEMP of the EIAR, Appendix 4-3 2019 CEMP of the rEIAR
	Water Quality Monitoring Plan	Section 4.5 Chapter 4 Description of the Prospective Development of this EIAR, Section 4.5 Chapter 4 Description of the Existing Development of the rEIAR, Appendix 4-3 CEMP of the EIAR, Appendix 4-3 2019 CEMP of the rEIAR
	Mitigation measures to be put in place to protect otter and salmon communities	Chapter 6 Biodiversity of this EIAR and Chapter 6 Biodiversity of the rEIAR
	Details of the appointment of an Ecological Clerk of Works (ECoW), detailing their roles and responsibilities.	Appendix 4-3 CEMP of the EIAR, Appendix 4-3 2019 CEMP of the rEIAR
Details of the proposed works that are within/adjacent/hydrologically connected to any designated sites.		Section 4.5 Chapter 4 Description of the Prospective Development of this EIAR, Section 4.5 Chapter 4 Description of the Existing Development of the rEIAR, Appendix 4-3 CEMP of the EIAR, Appendix 4-3 2019 CEMP of the rEIAR, Chapter 6 Biodiversity of this EIAR and Ch 6 Biodiversity of the rEIAR
A Habitats Regulations Assessment should be conducted to determine the potential impact to nearby European Sites.		Chapter 6 Biodiversity of this EIAR and Chapter 6 Biodiversity of the rEIAR, Natura Impact Statement (NIS) and remedial Natura Impact Statement (rNIS)

Geological Survey Ireland (GSI)

A scoping request was issued to Geological Survey Ireland (GSI) in September 2025, and a response was received on the 19th September 2025. The response included a list of GSI databases that should be used to form a detailed baseline study of the Site and highlighted that a portion of the Site falls within the Barnesmore Gap County Geological Site (CGS). A follow up scoping request was issued in March

2026, and a response was received on the 24th April 2026, reiterating the recommendation to use the GSI webviewer database.

The GSI response also highlighted that the Site falls across a range of groundwater vulnerabilities. The response acknowledged that a peat slide occurred within the site in November 2020 and requested the potential for run out to be addressed. It should be noted that the portion of the site that falls within this CGS comprises the existing site entrance and access track, along with an approx 3km stretch of land either side of the N15 road to the south of the Site. Refer to Chapter 8 Land, Soil and Geology and Chapter 9 Hydrology and Hydrogeology of this EIAR and the rEIAR for a discussion on the CGS, groundwater vulnerability and Appendix 8-1 Peat Stability Assessment Report of this EIAR and Appendix 8-1 Peat Stability Assessment Report of the rEIAR.

16.2 Assessment Methodology

This risk assessment focuses on the proposed works at the Site, i.e. the Prospective Development and the potential for it to cause major accidents or disasters during its lifetime. Likewise, it also considers its potential vulnerability of the Prospective Development to major accidents and disasters.

Current EIA practice already includes an assessment of some potential accidents and disaster scenarios such as pollution incidents to ground and surface watercourses as well as assessment of flooding events and peat instability. These are described in detail in the relevant Chapters of this EIAR (Refer to Chapter 8 Land, Soils and Geology, and Chapter 9 Hydrology and Hydrogeology for further detail).

The methodology for this risk assessment includes:

- Review of relevant Legislation and Guidance
- Review of Scoping Responses received from relevant Stakeholders.
- Site Specific Risk Assessment Methodology:
 - Risk Identification
 - Risk Classification
 - Risk Evaluation
 - Risk Assessment
- Description of Baseline Conditions including likely Site-Specific Risks
- Risk Assessment including of the Prospective Development
- Cumulative Risk Assessment of the Prospective Development
- In-cumulation Risk Assessment of the Prospective Development and the Existing Development (the Subject Development),
- Cumulative Risk Assessment of the Subject Development, and;
- Transboundary Risk Assessment of the Subject Development.

16.2.1 General

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

- Central Statistics Office (2016) *Census of Population 2016. Dublin: Central Statistics Office.*
- Central Statistics Office (2022) *Census of Population 2022. Dublin: Central Statistics Office.*¹
- Department of Defence (2021) *A National Risk Assessment for Ireland. Dublin: Department of Defence.*

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

- Department of Health Northern Ireland (2024). *Emergency Response Plan V5.5*²
- Department of the Taoiseach (2024) *National Risk Assessment 2024*. Dublin: Government of Ireland.
- Donegal County Council (2023). *Donegal County Major Emergency Plan 2023*³
- Donegal County Council (2024) *Climate Action Plan 2024-2029*
- Donegal County Council (2024). *Donegal County Development Plan 2024-2030*⁴
- Environmental Protection Agency (EPA) Maps.⁵
- Fehily Timoney (2026) Peat Stability Assessment Report (Prospective Development) (FT, 2026) (Appendix 8-1)
- Fáilte Ireland⁶
- Geological Services Ireland (GSI) Map viewer.⁷
- Health Service Authority (n.d). Guidance for Health and Safety in the Renewable Sector⁸
- Health Service Executive West and North West (2026) *Regional Major Emergency Plan for HSE Services in Counties Donegal, Sligo, Leitrim, West Cavan, Galway, and Roscommon. Dublin: Health Service Executive*. (February 2026)⁹
- Regional Planning Guidelines for the West Region 2010-2022¹⁰
- Northern and Western Regional Assembly (2020) *Regional Spatial and Economic Strategy (RSES) 2020-2032*.¹¹
- Rialtas na hÉireann (2024) *National Risk Assessment: Overview of Strategic Risks*¹²

16.2.2 Legislation and Guidance

16.2.2.1 Legislation

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

- The vulnerability of the Prospective Development to potential accidents and disasters
- The Prospective Development potential to cause major accidents or 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 this EIAR is set out in Section 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

² Department of Health Northern Ireland (August 2024). *Emergency Response Plan V5.5*. Available at: <https://www.health-ni.gov.uk/sites/default/files/publications/health/doh-emergency-response-plan-2024-version.pdf>

³ Donegal County Council (2023) *Major Emergency Plan*. Available at: <https://www.donegalcoco.ie/media/df1n5bji/donegal-mep-2023-public-version.pdf>

⁴ Donegal County Council (2024) *Donegal County Development Plan*. Available at: https://www.donegalcocodocs.ie/docs/CountyDonegalDevelopmentPlan2024-2030_041125.pdf

⁵ <https://gis.epa.ie/EPAMaps/>

⁶ Fáilte Ireland <https://www.failteireland.ie/>

⁷ <https://geodata.gov.ie/maps.arcgis.com/apps/webappviewer/index.html?id=be808e49f2be4808bd4e2e60820fa856>

⁸ Health Service Authority advice for Health and Safety in the Renewable Sector. Available at: https://www.hsa.ie/eng/your_industry/renewable_energy/

⁹ HSE Regional Major Emergency Plan Available at: https://assets.hse.ie/media/documents/HSE_West_and_North_West_Interim_Regional_Major_Emergency_Plan_V2_2026-02-25.pdf

¹⁰ North West Regional Assembly (2010). *Regional Planning Guidelines for the West Region 2010-2022*. Available at: <https://www.nwra.ie/wp-content/uploads/Planning-Guidelines-for-the-West-Region.pdf>

¹¹ North West Regional Assembly (2020). *Regional Spatial and Economic Strategy 2020-2032* <https://www.nwra.ie/rses/>

¹² Rialtas na hÉireann <https://assets.gov.ie/static/documents/national-risk-assessment-2024-overview-of-strategic-risks.pdf>

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”.

16.2.2.2 Guidance Documents

The following guidance documents informed and directed the preparation of this section:

- Department of Environment, Heritage and Local Government (2010). A Guide to Risk Assessment in Major Emergency Management
- Department of Housing, Local Government and Heritage (2024). A Framework for Major Emergency Management – A Guide to Regional Risk Assessment¹³
- Department of the Taoiseach (2024). National Risk Assessment 2024 – Overview of Strategic Risks¹⁴
- Donegal County Council (2023) Major Emergency Plan 2023¹⁵
- Environmental Protection Agency (2014). Guidance on Assessing and Costing Environmental Liabilities¹⁶
- Environmental Protection Agency (2022), Guidelines on the Information to be Contained in Environmental Impact Assessment Reports¹⁷.
- European Commission (2017). Environmental Impact Assessment of Projects – Guidance on the preparation of Environmental Impact Assessment Reports¹⁸.
- Health and Safety Authority (n.d.) Guidance on Health and Safety in the Renewable Energy Sector.

On a regional scale, County Donegal falls under the scope of the HSE West and North West Regional Major Emergency Management Area.

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.

¹³ DoHLGH (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

¹⁴ Department of the Taoiseach (2024). National Risk Assessment 2024 – Overview of Strategic Risks. Available at: <https://assets.gov.ie/static/documents/national-risk-assessment-2024-overview-of-strategic-risks.pdf>

¹⁵ Donegal County Council (2023) Major Emergency Plan. Available at: <https://www.donegalcoco.ie/media/df1n5bj/donegal-mep-2023-public-version.pdf>

¹⁶ 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

¹⁷ EPA (2022) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports. Available at: https://www.epa.ie/publications/monitoring-assessment/assessment/EIAR_Guidelines_2022_Web.pdf

¹⁸ EC (2017). Environmental Impact Assessment of Projects – Guidance on the preparation of Environmental Impact Assessment Reports. Available at: https://albertslund.dk/media/4wyitngv/eu_2017_environmental-impact-assessment-of-projects-guidance-on-the-preparation-of-the-environmental-impact-assessment-repo.pdf

16.2.4 Impact Assessment Methodology

16.2.4.1 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 Prospective Development. The approach to identifying and quantifying risks associated with the Prospective Development 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 document¹⁹ and the EPA 'Guidance on assessing and costing environmental liabilities' 2014 document²⁰. The following steps were taken as part of the site-specific risk assessment:

- Risk Identification
- Risk Analysis of likelihood and impact, and
- Risk Evaluation

16.2.4.1.1 Risk Identification

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

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

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

16.2.4.1.2 Risk Analysis

Identify the Reasonable Worst-Case Scenario (RWCS)

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

Classification of Likelihood

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 16-3 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.

¹⁹ 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

²⁰ 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

Table 16-3 Classification of Likelihood (Source DoHLGH, 2024)

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 of given scale ²¹

Classification of Impact

The 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 Donegal County Council Major Emergency Plan (2023) will work to reduce the impact of any major accident or disaster. The consequence of the impact if the event occurs has been assigned as described in Table 16-4.

The impact of a risk to/from the Prospective Development 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 impact rating, the highest score under any of the impact categories (People, Environment, Essential Services or Social) is allocated, not the mean or aggregate.

²¹ Australian National Emergency Risk Assessment Guidelines (2020) Available at:
<https://knowledge.aidr.org.au/resources/handbook-nationalemergency-risk-assessment-guidelines/>

Table 16-4 Classification of Impact (Source: DoHLGH, 2024)

Impact Category	Significance of Effects	People	Environment	Essential Services	Social
1 Very Low Impact	Slight	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	Moderate	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	Significant	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	Very Significant	Deaths greater than 1 in 40,000 people for population of interest OR Critical injuries/illness greater than 1 in 40,000 OR Serious injuries greater than 1 in 20,000	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	Profound	Deaths greater than 1 in 20,000 people for population of interest	Very heavy contamination,	Loss of delivery of services essential for the	Community unable to function without support

Impact Category	Significance of Effects	People	Environment	Essential Services	Social
		OR Critical injuries/illness greater than 1 in 20,000	widespread effects of extended duration	maintenance of vital societal 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 16-5 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 Prospective Development. 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 16-5 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

16.3.1 Baseline Site Conditions

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 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 impacting the Prospective Development and causing environmental damage.

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. Ireland’s geographic position means that tsunamis, which may pose a risk to developments similar to the

Prospective Development in other geographic locations, are of a low likelihood of occurrence, and are less likely to be of a significant magnitude in order 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 the accident. The Prospective Development 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 are no registered sites within Donegal County that store/handle sufficient quantities of hazardous materials to constitute classification as a SEVESO site

The Prospective Development has low potential to cause natural disasters or major accidents. As detailed in Sections 8.3.3 of Chapter 8 this EIAR, there are sections of peat identified within the Site on the published soils map (<https://gis.epa.ie/EPAMaps/>), published subsoils maps (www.gsi.ie), and Appendix 8-1 of this EIAR Peat Stability Assessment Report. Appendix 8-1 contains a comprehensive Geotechnical and Peat Stability Risk Assessment, with its findings showing that the Wind Farm Site has an acceptable margin of safety, and is suitable for the Prospective Development, and includes detailed mitigation and control measures.

As stated in Chapter 8 Land, Soils and Geology of this EIAR, the blanket peat found within the Site has been significantly degraded due to commercial forestry operations. The Prospective Development is located in an upland site, therefore there is potential for peat slides. The GSI Landslide Susceptibility Mapping has classified the areas of the Site where the majority of the Wind Farm Site infrastructure is located as having a moderately high to low potential for landslides²².

Any risks associated with flooding, impacts on infrastructure, accidents etc are addressed in the sections below.

Current EIA practice already includes an assessment of some potential major accidents and disaster scenarios, such as pollution incidents to ground and watercourses, as well as assessment of flooding events. These are described in detail in the relevant EIAR assessment chapters (refer to Chapters 5 to 16, Appendix 9-1 Flood Risk Assessment, Appendix 8-1 Peat Stability Assessment Report for further detail).

16.3.2 DCC Major Emergency Plan 2023-Site Specific Risks

The functional area of Donegal County Council, and therefore the Site, falls under the West and North West Regional Major Emergency Plan region. The Major Emergency Plan prepared by Donegal County Council (2023) outlines the following potential major emergency scenarios in the county:

- **Natural**
 - Severe Weather Event
 - Wildland Fires
 - Animal Disease
- **Civil**
 - Water Contamination
 - Influenza (Flu) Pandemic
- **Technological**
 - Building Fire
 - Hazmat Release

²² GSI (2016). National Landslide Susceptibility Mapping Project. Available at: <https://www.gsi.ie/en-ie/publications/Pages/National-Landslide-Susceptibility-Map.aspx>

- Industrial Fire/Explosion
- **Transportation**
 - Aircraft Incident
 - Multi-vehicle RTC
 - Marine Incident

There are no Site / Event specific major emergency plans for Donegal County within the Donegal County Council Major Emergency Plan.

As part of the Local Authority Climate Action Plan²³ for County Donegal (Donegal LACAP) a qualitative Climate Change Risk Assessment was carried out for County Donegal. A profile of historical climate hazards in County Donegal from 1973-2022 and assessment on future climate hazards is provided in the County Donegal LACAP. Future projections of climate change indicate that Severe Windstorms will remain consistent with existing conditions, while risk of Cold Spells and Heavy Snow Fall will decrease. However, risk is predicted to increase for all other identified climate hazards (i.e., Heatwave, Droughts, Coastal Flooding, Coastal Erosion, Pluvial Flooding and Fluvial Flooding).

The risks which are most relevant in the context of the Prospective Development and the Site are described below.

16.3.2.1 Natural

Severe Weather Events

The climate change risk assessments included in the Donegal LACAP detail the major risks posed from climate change being river flooding, coastal flooding, pluvial flooding, coastal erosion, severe windstorms, heatwaves, and drought. 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 Donegal 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 of this EIAR for further information on the baseline environment and the future environment relative to the Site.

Wildland Fires

The likelihood of fire occurring at the Prospective Development is low. Good site management practices will be implemented by all staff on the Site during the construction, operational and decommissioning phases in order to further reduce this risk. The likelihood of fire occurring at the Wind Farm Site is low, with land use being dominated by the partially constructed Meenbog Wind Farm, blanket bog and commercial forestry. 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 of the Prospective Development and Appendix 4-3 CEMP of this EIAR for details.

²³ Donegal County Council Local Authority Climate Action Plan 2024-2029. Available at: <https://www.donegalcoco.ie/media/s2cpk5v5/climate-action-plan-english-web-version-v2-1.pdf>

16.3.2.2 Civil

Water Contamination

The Prospective Development has the potential to cause contamination and pollution of soil and ground and surface water from potential release of hydrocarbons, earthworks and excavations during the construction phase. These impacts are addressed in detail in Chapter 8 Land, Soils and Geology and Chapter 9 Water of this EIAR and are not related to either the vulnerability of the Prospective Development to natural disasters or major accidents nor the potential for the Prospective Development to cause natural disasters or accidents. Accidental spillage during refuelling of construction plant with petroleum hydrocarbons is a pollution risk. The accumulation of small spills of fuels and lubricants during routine plant use can also be a significant pollution risk. Large spills or leaks have the potential to result in significant effects (i.e., contamination of subsoils and pollution of the underlying aquifer) on the geological and water environment. Best practise measures pertaining to hydrocarbon use and storage as detailed in Chapter 8 and the CEMP (Appendix 4-3) of this EIAR will minimise the potential for these impacts to occur. The release of wastewater at the Wind Farm Site could pose a risk to down gradient groundwater wells, groundwater quality and surface water quality. Proven and effective methods to mitigate against these potential impacts are detailed in Chapter 9 Water and best practise measures during all phases of the Prospective Development (CEMP Appendix 4-3), which minimise the potential for leaks and will break the potential pathways between any source and receptor. Indirect impacts associated with major accidents and / or natural disasters on contamination are considered further in Section 16.4.1.

There is potential for hazardous materials in the form of hydrocarbons to be transported to and used on site. Mitigation measures as best practice as detailed in Chapter 9 Water and the CEMP (Appendix 4-3), respectively, will minimise the potential for leaks and will break the potential pathways between any source and receptor. The removal of hazardous materials will be done by licenced operators for disposal at licensed waste facilities. There is limited potential for hazardous material release during the operational phase of the Prospective Development. On occasion, operational maintenance crew may need to dispose of hydrocarbon waste such as oil that may be required during turbine maintenance procedures. Any waste that does arise will be minimal and waste management will be carried out in accordance with *'Best Practice Guidelines on the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects'* (2021) produced by the EPA.

The CEMP includes a Waste Management Plan which outlines the best practice procedures during the decommissioning phases of the project. The WMP outlines the methods of waste prevention and minimisation by recycling, recovery and reuse at each stage of decommissioning of the Prospective Development. Disposal of waste will be seen as a last resort. Please see the CEMP (Appendix 4-3) for best practice measures to prevent the creation of waste which During the decommissioning phase. Please see Appendix 4-6 for the Decommissioning Plan of this EIAR for further information.

16.3.2.3 Technological

Building Fire

The likelihood of fire occurring at the Prospective Development is low. The likelihood of fire occurring will be further lowered by the implementation of good site management practices during the construction, operational and decommissioning phases.

During construction, operation and decommissioning of the Prospective Development, 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 of the Prospective Development and Appendix 4-3 CEMP for details.

The possibility of fires is low due to the sparse distribution of buildings in the Wind Farm Site area, and the landcover of the Wind Farm Site being dominated by the partially constructed Meenbog Wind Farm, blanket bog and commercial forestry.

Industrial Fire/Explosion

As stated above, the likelihood of fires at the Prospective Development is low. There are no COMAH sites in the vicinity of the Prospective Development which store hazardous materials, and there is no recorded history of industrial fire / explosion incidents. The onsite 110kV substation has been in operation at the Meenbog Wind Farm since 2021 with no recorded incidents to date. The possibility of industrial fires or explosions is low due to the sparse distribution of buildings in the Wind Farm Site area. The ERP, as detailed in Appendix 4-3 CEMP and Appendix 4-6 Decommissioning Plan provides details of procedures to be adopted in the event of an emergency in terms of site health and safety and environmental protection.

Hazmat Release

As outlined in Section 16.3.1, with the implementation of best practice and mitigation measures detailed in Appendix 4-3 CEMP of this EIAR there will be no pathways between potential sources and environmental receptors, minimising the risk of contamination to soils, and to ground and surface waters within and adjacent to the Site.

16.3.2.4 Transportation

As detailed in Chapter 15: Material Assets, the Prospective Development will utilise the N56 and N15 National Road, the Port of Killybegs in order to facilitate construction and turbine delivery to the Wind Farm Site. A Traffic Management Plan (TMP) (Appendix 15-2) is included as part of detailed traffic and transport assessment provided in Chapter 15 Material Assets of this EIAR.

The Prospective Development will utilise the existing road network during the construction, operation and decommissioning phases. Construction related traffic will comprise turbine and substation components, as well as construction materials delivery and the subsequent return of empty vehicles, and daily construction staff movements to and from the Site.

It is proposed that large wind turbine components will be delivered to the Wind Farm Site under Garda escort and mainly at night.

Potential impacts that may occur on the identified road networks could be caused by an accident during the delivery of the turbines, collisions onsite and offsite with vehicles involved in construction and operation of the Prospective Development, and damage to critical transport infrastructure caused by extreme weather i.e., periods of heavy rainfall, taking into account climate change and strong winds. As detailed in Chapter 15 of this EIAR: Material Assets, the localised traffic disruptions due to other proposed works will be mitigated using industry standard traffic management measures. These traffic management measures will be designed in accordance with the Department of Transport's 'Guidance for the Control and Management of Traffic at Roadworks – Second Edition (2010)'.

Killybegs Port in Killybegs, Co. Donegal is the proposed point of arrival for the large turbine components for the Prospective Development. The port is a well-established point of arrival for wind turbine components of similar scale into the State on a regular basis, as is the road network between the

port and the national road network. For the purposes of this EIAR only the Killybegs Port has been considered.

For further discussion on aviation, please see Section 15.2.3 of chapter 15: Material Assets.

16.3.2.5 Health and Safety

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

The Prospective Development will be constructed in accordance with all relevant Health and Safety Legislation. 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 includes the use of all necessary Personal Protective Equipment (PPE) and adherence to the site Health and Safety Plan. A Health and Safety Plan covering all aspects of the construction 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 construction stage. An Emergency Response Plan (ERP) is detailed in Appendix 4-3 CEMP of this EIAR. 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. The ERP will be updated with any and all additional relevant information and procedures prior to construction of the Prospective Development.

16.3.3 HSE West and North West Interim Regional Major Emergency Plan February 2026

The 'HSE West & North West Interim Regional Major Emergency Plan for HSE Services in counties Donegal, Sligo, Leitrim, West Cavan, Galway, Mayo and Roscommon' was released in February 2026. The plan has been updated from the previous plan following the establishment of Regional Health Areas (RHAs) under Sláintecare reform (2022–2024). No changes were made to the plan's core content, principles, or operational arrangements. A comprehensive review is scheduled for 2026, following further development of RHA structures and anticipated national updates to emergency management policy. This includes the forthcoming revision of *A Framework for Major Emergency Management (2006)*, which will inform the next full version of the plan. Within this interim plan, the main key risks identified for the 8-county region are listed in Table 16-6 below. Risks relevant to the Site and Prospective Development are discussed above in sections 16.3.1 and 16.3.2. Some risks are not applicable for the Site or Prospective Development and have been categorised as such.

Table 16-6: Key risks identified for the West & North West Region (Interim Regional MEP February 2026)

Key Risk	Location in rEIAR
Severe Weather	Discussed in Section 16.3.1 and 16.3.2.1
Flooding	Discussed in Section 16.3.1
Landslide/Earthquakes/Tsunami	Discussed in Section 16.3.1
Wildfire - Gorse/Grass/Forest/Bog Fire	Discussed in Section 16.3.2.1
Aircraft Incident F Major	Discussed in Section 16.3.1 and 16.3.2.4
Ground Aircraft Incident	N/A

Key Risk	Location in rEIAR
Rail Incident	N/A
Major RTC	Discussed in section 16.3.2.4
RTC Hazmat	Discussed in section 16.6.3.1 and 16.3.2.4
Marine Incident	N/A
Civil Disturbance	N/A
Major Crowd Safety /Large Building Fire	Discussed in Section 16.3.1 and 16.3.2.3
Terrorism	N/A
Mass Public Violence	N/A
Pandemic	N/A

16.3.4 Baseline Conditions Summary

As detailed above, a wind farm is not a recognised source of pollution. The potential natural disasters that may occur are therefore limited to issues such as flooding and fire and are described in the Sections below. Mitigation measures are detailed in all relevant chapters in relation to mitigation measures to avoid the release of hazardous materials, spills or contamination events at the Site, and a detailed traffic management safety measures are provided in Chapter 15 Material Assets of this EIAR.

During construction of the Prospective Development, 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'. A Health and Safety Plan covering all aspects of the construction 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 construction stage. An Emergency Response Plan (ERP) is detailed in Appendix 4-3 CEMP of this EIAR. 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. The ERP will be updated with any and all additional relevant information and procedures prior to construction of the Prospective Development.

16.4 Risk Assessment

This section outlines the possible risks associated with the Prospective Development for the construction, operational and decommissioning phases. These risks have been assessed in accordance with the relevant classifications as outlined in Table 16-3 and 16-4. As outlined in Section 16.2.4.2.2, 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 i.e. pre-mitigation.

16.4.1 Likely Significant Effects

16.4.1.1 Do-Nothing Scenario

If the Prospective Development 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 Prospective Development were not to proceed, the opportunity to capture a significant part of County Donegal'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.

16.4.1.2 Identification of Potential Effects During Construction

A risk register has been developed which contains all potentially relevant risks identified during the construction phase of the Prospective Development. Eight risks specific to the construction of the Prospective Development have been identified and are presented in Table 16-7. Utility emergencies risk, such as the risk of construction activities on the road network which would impact on built services and utilities within or adjacent to the road network, have been scoped out of further assessment for the Prospective Development, due to the nature of the activities which are necessary to complete construction, operate and decommission the Site. Further information on these and other potential risks such as contamination, peat stability, flooding, traffic incident and aircraft collision are considered in the relevant chapters of the EIAR.

Table 16-7 Risk Register Construction Phase

Risk ID	Potential Risk	Possible Cause
Potential vulnerability to accidents and / or natural disasters		
A	Critical Infrastructure Emergencies Risk of delivery of turbines and infrastructure to site.	Traffic accident during turbine delivery 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 Wind Farm 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 Prospective Development	Driver negligence or failure of vehicular operations on Wind Farm Site roads. Traffic Management not implemented
F	Contamination	Accidental fuel spillage during delivery to site.

Risk ID	Potential Risk	Possible Cause
	Discharge or spillage of fuel, chemical solvents onto subsoils and into watercourse or percolated to groundwater. Groundwater and surface water emissions from construction activities. Risk of sediment-laden run off reaching surface water, groundwater system, or contamination of public water supply	Failure of fuel storage tank or tanks in plant and machinery and vehicles leading to uncontrolled emissions. Drainage and seepage water resulting from accident during infrastructure excavation; Stockpiled excavated material becoming unstable and providing a point source of exposed sediment; Excavation works during the construction of the Prospective Development which may result in entrainment of sediment from the excavations during construction.
G	Fire / Explosion Risk of use of fuels/flammables during construction	Equipment or infrastructure failure; Fuel spillage/storage; Electrical problems; and Employee negligence.
H	Collapse / damage to structures	Earthquake, land slide, extreme weather events; Vehicular collisions due to driver negligence on public roads; and Traffic Management not implemented.

16.4.1.3 Identification of Potential Effect During Operation

Risks specific to the operation of the Prospective Development have been identified and are presented in Table 16-8.

Table 16-8 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, strong winds and lightning.

Risk ID	Potential Risk	Possible Cause
J	Flooding Risk of flooding in areas surrounding the Prospective Development impacting the construction phase and leading to environmental emissions	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds
K	Peat Stability Movement of peat within the Wind Farm Site during operation	Severe weather conditions – storm, flooding
Potential to cause accidents and / or natural disasters.		
L	Traffic Incident Collisions onsite and offsite with vehicles involved in operation of Prospective Development	Driver negligence or failure of vehicular operations on Wind Farm Site roads. Traffic Management not implemented
M	Contamination Discharge or spillage of fuel, chemical solvents, sewage or wastewater into watercourse or percolated to groundwater.	A vehicular incident on Wind Farm Site roads involving fuel, wastewater or sewage transportation in the operational phase. Spill or leak of oil during operational maintenance.
N	Fire / Explosion	Equipment or infrastructure failure; Fuel spillage/storage; Electrical problems; and Employee negligence.
O	Collapse / damage to structures	Earthquake, landslides, extreme weather events; and Vehicular collisions due to driver negligence on Wind Farm Site roads.

16.4.1.4 Identification of Effect During Decommissioning

Risks specific to the decommissioning of the Prospective Development have been identified and are presented in Table 16-9.

Table 16-9 Risk Register – Decommissioning Phase

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

Risk ID	Potential Risk	Possible Cause
P	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.
Q	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.
R	Peat Stability Movement of peat within Wind Farm Site during decommissioning	Severe weather conditions – storm, flooding
Potential to cause accidents and / or natural disasters.		
T	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.
T	Contamination Discharge or spillage of fuel, chemical solvents into watercourse or percolated to groundwater	Accidental fuel spillage during delivery to the Wind Farm Site. Failure of fuel storage tank or tanks in plant and machinery and vehicles leading to uncontrolled emissions.
U	Fire / Explosion	Equipment or infrastructure failure; Fuel spillage/storage; Electrical problems; and Employee negligence.

These risks have been assessed in accordance with the relevant classification (Refer to Table 16-3 and Table 16-4), and the resulting risk analysis is detailed in Appendix 16-1: Risk Assessment.

The risk register is based upon possible risks associated with the Prospective Development. As outlined in Section 16.2.4.2.2, 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.

16.4.1.5 Risk Assessment Summary

Appendix 16-1: Risk Assessment contains a risk assessment which has been developed and contains all potentially relevant risks identified during the construction, operation, and decommissioning phases of the Prospective Development. 9 no. risks specific to the construction, operation and maintenance, and

decommissioning of the Prospective Development have been identified and are presented in Appendix 16-1.

The risk assessment for each of the potential risks identified are consolidated in Table 16-10 which provides their 'risk-score'. A corresponding risk matrix is provided in Table 16-11, which is colour coded to provide an indication of the critical nature of each risk. As outlined in Section 16.2.4.2, the red zone represents 'high risk' scenarios, the amber zone represents 'medium risk' scenarios, and the green zone represents 'low risk' scenarios.

Table 16-10 Risk Scores

Risk ID	Potential Risk	Likelihood Rating	Consequence Rating	Risk Score
Construction Phase				
A	Critical Infrastructure Emergencies	1	1	1
B	Severe Weather	3	1	3
C	Flooding	1	1	1
D	Peat Stability	1	3	3
E	Traffic Incident	3	2	6
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	Flooding	1	1	1
K	Peat Stability	1	3	3
L	Traffic Incident	2	2	4
M	Contamination	2	1	2
N	Fire / Explosion	2	2	4
O	Collapse/ damage to structures	1	1	1
Decommissioning Phase				
P	Severe Weather	3	1	3
Q	Flooding	1	1	1
R	Peat Stability	1	3	3
S	Traffic Incident	3	2	6
T	Contamination	2	2	4
U	Fire / Explosion	2	2	4

Note: Due to the limited nature of construction for to be completed for the Prospective Development, Utility Emergencies are not assessed as part of the risk assessment of the Construction Phase.

Table 16-11 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, I, P	E, S			
	2. Very Unlikely	M	F, G, L, N, T, U			
	1. Extremely Unlikely	A, C, H, J, O, Q		D, K, R		

Table 16-11 presents the potential risks identified during the construction, operation and decommissioning of the Prospective Development 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 Prospective Development are identified below. It should be noted 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 and appendices.

16.4.1.6 Traffic Incident During Construction, Operation and Decommissioning (E, L, S)

There is a potential risk of traffic incident from site activities during the construction, operation and decommissioning phases from potential driver negligence, failure of vehicular operation on the Site, lack of implementation of traffic management. The risk of traffic incident was given a risk score of 6 during the construction and decommissioning phases, and a risk score of 4 during the operational phase on a precautionary basis. The risk of traffic incident will have a moderate consequence when considering the RWCS but is ‘unlikely’ to occur, representing a ‘low-risk scenario’ during the construction, and decommissioning phases. The risk of traffic incident is ‘unlikely’ to occur and will have ‘low impact’ consequences should it do so, representing a ‘low-risk scenario’ during the operation phase.

However, as outlined in Section 15.1 of Chapter 15 Material Assets of this EIAR, specific traffic management measures and internal Wind Farm Site road network speed limits will be put in place to reduce the risk of traffic incident in association with the Prospective Development. Further health and safety measures to be put in place are detailed in Appendix 4-3 CEMP and 4-6 Decommissioning Plan.

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

16.4.1.7 Contamination During Construction and Decommissioning (F, T)

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 on a precautionary basis. However, as outlined in Chapter 8 Land, Soils and Geology Section 8.6, and Chapter 9 Water, Section 9.5 of this EIAR, measures will be put in place 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 ‘low impact’ consequences should it do so, representing a ‘low-risk scenario’ during the construction and decommissioning phases.

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

16.4.1.8 Fire/ Explosion During Construction, Operation and Decommissioning (G, N, U)

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 Prospective Development will be designed, built and operated in line with current best practice. Further, in accordance with Chapter 19 of the Safety, Health and Welfare at Work Acts 2005 to 2014, the Prospective Development shall be subject to a fire safety risk assessment which will assist in the identification of any major risks of fire on the Site.

Therefore, the risk of fire occurring at the Prospective Development resulting in a major accident and/or disaster was given a risk score of 4 on a precautionary basis. This indicates a scenario that is ‘very unlikely’ to occur and having ‘low’ consequences should it do so, representing a ‘low-risk scenario’ during the construction, operational and decommissioning phases.

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 during construction were identified as identified as ‘Traffic Incident’, ‘Contamination’ and ‘Fire/Explosion’ and, risk of ‘Traffic Incident’ and ‘Fire/Explosion’ during operation; ‘Traffic Incident’, ‘Contamination’ and ‘Fire/Explosion’ for the decommissioning stage. Mitigation measures proposed for the highest scoring risk scenarios (risk score of 4 or more) are outlined below, with further detail in their relevant chapters. In addition, the next highest scores was for ‘Peat Stability’ and ‘Severe Weather’ during construction, operation, and decommissioning. Mitigation measures specific to these and other risks can be found in their relevant chapters and appendices, such as Chapter 8 Land, Soils and Geology and Appendix 8-1 Peat Stability Assessment Report, or Appendix 4-3 CEMP for Peat Stability and Severe Weather respectively.

The Prospective Development will be designed and built in line with current best practice and, as such, mitigation against the risk of major accidents and/or disasters will be 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.

16.4.2.1 **Mitigation – Traffic Incident During Construction and Decommissioning (E, L, S)**

The Prospective Development will be subject to a Traffic Management Plan which will be agreed with Donegal County Council prior to the commencement of construction, speed limits will be implemented on the internal Wind Farm Site roads network, and health and safety measures in accordance with the Safety, Health and Welfare at Work Acts 2005 to 2014 will be implemented to assist in the identification of any major risks of traffic incident on Site, and the mitigation of same. The Meenbog Wind Farm internal road network within the Wind Farm Site 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.

Refer to Appendix 4-3 for the CEMP and Appendix 4-6 Decommissioning Plan that sets out the minimum health and safety standards to be employed by the contractor during the construction operation and decommissioning of the Prospective Development. Refer to Appendix 15-2 Traffic Management Plan for further detail on traffic management at the Site.

All mitigation measures proposed as part of the Prospective Development are also listed in Chapter 18 Schedule of Mitigation and Monitoring Measures.

16.4.2.2 **Mitigation – Contamination During Construction and Decommissioning (F, T)**

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 Land, Soils and Geology and Chapter 9 Water 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 Prospective Development and is included in Appendix 4-3 of this EIAR. Upon a grant of planning permission for the Prospective Development, the CEMP will be updated to reflect the conditions stipulated in the 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 4-3 for the CEMP that sets out the minimum standards to be employed by the contractor.

All mitigation measures proposed as part of Prospective Development are also listed in Chapter 18 Schedule of Mitigation and Monitoring Measures.

16.4.2.3 **Mitigation – Fire/Explosion During Construction, Operation and Decommissioning (G, N, U)**

The Prospective Development will be subject to a fire safety risk assessment in accordance with Chapter 19 of the Safety, Health and Welfare at Work Acts 2005 to 2014, which will assist in the identification of any major risks of fire on site, and mitigation of the same during operation.

As outlined in Section 4.4 of Chapter 4 Description of the Prospective Development of this 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 4-3 for the CEMP that sets out the minimum standards to be employed by the contractor.

All mitigation measures proposed as part of the Prospective Development are also listed in Chapter 18 Schedule of Mitigation and Monitoring Measures.

16.4.2.4 Residual Effects

The risk of a major accident and/or disaster during the construction of the Prospective Development is considered 'low' in accordance with the '*A Framework for Major Emergency Management – A Guide to Regional Risk Assessment*' (DoHLGH, 2024) Document.

It is considered that when the above mitigation is implemented, and all mitigation detailed in the EIAR is implemented, there will not be significant residual effect(s) associated with the construction, operation and decommissioning of the Prospective Development.

16.4.3 Monitoring

16.4.3.1 Monitoring During Construction

As outlined in Section 4.4 of Chapter 4 Description of the Prospective Development of this 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 4-3 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.

16.4.3.2 Monitoring During Operation

The operator of the Prospective Development will continue to assess the risk of major accidents and/or disasters on Site on an on-going basis during operation.

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.

16.4.3.3 Monitoring During Decommissioning

As outlined in Section 4.11 of Chapter 4 Description of the Prospective Development of this 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. 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 of this EIAR which sets out all proposed Mitigation and Monitoring Measures for all three phases of the Prospective Development.

16.5 Cumulative Risk Assessment– Prospective Development

This section considers the cumulative risk of the Prospective Development with all relevant other plans and projects.

A search in relation to plans and projects that may have the potential to result in a cumulative impact with the Prospective Development on the environment was carried out as part of this EIAR. The

Prospective Development has been considered, in combination with existing, permitted and proposed projects and plans (wind energy or otherwise), as set out in Section 2.9 in Chapter 2 Background and Policy of this EIAR.

All elements of the Prospective Development 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 Prospective Development, 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 Prospective Development 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 Prospective Development has low potential to cause natural disasters or major accidents. The majority of the Wind Farm Site footprint has been developed as part of the Existing Development and, 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 Prospective Development's potential to cause accidents or natural disasters.

Following a detailed assessment of the potential for any further impact when considered in combination with any or all of the plans and projects set out in set out in Chapter 2 Background and Policy, Section 2.9 of this EIAR, the Prospective Development, with mitigation measures in place, was found to have no potential for significant in-combination or cumulative effects associated with the potential for the project to be impacted by major accidents and/ or natural disasters or the Prospective Development potential to cause major accidents and/ or natural disasters. This is based on the low risk associated with the Subject Development described in this Chapter of this EIAR and a review of the nature of the surrounding land uses and projects existing or intended in the surrounding area. Therefore, the cumulative residual effect of the Prospective Development to cause or be impacted by major accidents and natural disasters is not significant.

16.6

In-Cumulation Risk Assessment

This section considers the in-cumulation risk of the combination of the Existing Development and Prospective Development (the Subject Development). Table 16-12 below details the residual in-cumulation risk of the Subject Development.

Table 16-12 Assessment of potential In-Cumulation Risk of the Subject Development

Potential Risk		Prospective Development	Existing Development	Subject Development
	Critical Infrastructure Emergencies	The risk of traffic accident during turbine delivery due to 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) of this EIAR. There is no risk of critical infrastructure emergencies due to the operational phase of the Prospective Development. Therefore, there is No Significant Effect.	The risk of traffic accident during severe weather conditions impacting the identified road network was unlikely when considering the assessment in Chapter 11 Climate (weather conditions recorded over the last 30 years within the area) and Chapter 15.1 – Traffic Assessment (turbine delivery occurring during the night, Garda patrolled, etc) No critical infrastructure emergencies were reported during the construction phase of the Existing Development. The residual effect on/from critical infrastructure emergencies during the construction of the Existing Development is Not Significant.	The risk of critical infrastructure emergencies associated with both the Prospective Development and Existing Development are considered to be Not Significant. There is no temporal overlap between the Prospective Development and the Existing Development and therefore no potential for an in cumulation effect. The potential for In-Cumulation effects from the Subject Development is Not Significant.
	Severe Weather	As stated in Section 16.4 above, the risk of severe weather is unlikely, and in the event of severe weather during the construction and	Severe weather events may result in major accident scenarios such as flooding, leading to the mobilisation of	The risk of severe weather events from both the Prospective Development and Existing

		decommissioning phase the works programme for the groundworks as detailed in the Construction and Environmental Management Plan (CEMP), (Appendix 4-3) will take account of weather forecasts and predicted rainfall in particular and works will be paused if require. Therefore, there is No Significant Effect.	contaminants. These may be transported via hydrological pathways to downstream receptors. As detailed in the 2019 CEMP, the construction of the Existing Development was dependent on weather forecasting and periods of heavy rain in particular. If and when such events occurred, works were temporarily suspended. No severe weather-related incidents were reported during the construction phase of the Existing Development. The residual effect on/from severe weather during the construction of the Existing Development is Not Significant.	Development are considered to be Not Significant. There is no temporal overlap between the Prospective Development and the Existing Development and therefore no potential for an in cumulation effect. The potential for In-Cumulation effects from the Subject Development is Not Significant.
	Flooding	The risk of flooding is considered very unlikely when taking into account the assessment in Chapter 9: Water of this EIAR, the raising of infrastructure in flood zones to above flood zone level, the implementation of a bespoke drainage design plan for the Prospective Development and the flood history of the site since the implementation of the drainage management systems associated with the Existing Development. Since its installation, there has been no flooding at the Site. Therefore, there is No Significant Effect.	During the construction phase of the Existing Development, the risk of flooding was considered Very Low; refer to Section 16.6 above and Chapter 9: Hydrology and Hydrology of the rEIAR. The Wind Farm Site is not mapped within any historic or modelled groundwater flood zones except for two bridge crossings on the N15. There were no flooding-related incidents during the construction of the Existing Development, including the laying of the grid connecting cabling which is located within the N15. The residual effect on/from flooding during the construction of the Existing Development is Not Significant	The risk of flooding associated with both the Existing Development and the Prospective Development are considered to be Not Significant. There is no temporal overlap between the Prospective Development and the Existing Development and accordingly, there is no potential for in-cumulation effects. The potential for cumulative flooding effects from the Subject Development is Not Significant.

Peat Stability	There is a potential risk of peat instability due to the Prospective Development. The risk of peat instability was given a risk score of 3 due to the sensitivity of the receiving environment. The risk of peat instability has been minimised through the careful design of the Meenbog Wind Farm and will be further limited through the implementation of the best practice construction control measures outlined in the; Appendix 8-1 Peat Stability Assessment of the EIAR. The findings of the peat assessment showed that the Prospective Development works have a low risk of peat failure. Therefore, there will be No Significant Effect.	During the construction phase of the Existing Development, a peat slide occurred in November 2020 Mitigation measures and remediation works, as outlined in this rEIAR, were implemented following the incidents. With these measures in place, the residual effect on the environment is considered to be Not Significant. An assessment of the site with respect to peat stability was conducted by Fehily Timoney in 2026. The report concludes that the as constructed works associated with the Meenbog Wind Farm are currently stable and that it is considered there is no ongoing risk of peat failure on the site from the Existing Development. The residual effect to/from the Existing Development on peat instability is Not Significant	The risk of peat instability for both the Prospective Development and Existing Development are considered as Not Significant. There is no temporal overlap between the Prospective Development and the Existing Development. The nature and scale of the groundworks required to complete the Subject Development are minor. Therefore there is no potential for an in cumulation effect. The potential for In-Cumulation effects from the Subject Development is Not Significant.
Traffic Incident	Having regard to on-site speed limits and vehicular movements, the potential risk of a traffic incident due to the Prospective Development is low. Therefore, there is No Significant Effect.	Traffic-related accidents, including collisions involving vehicles transporting fuels, chemicals, or hazardous materials, represent a potential major accident. No critical or strategic infrastructure is located within the Wind Farm Site and Grid Connection Site. The N15 overlaps	The risk of traffic incident associated with both the Prospective Development and Existing Development are considered as Not Significant. There is no temporal overlap between the Existing Development and the Prospective Development, and no traffic incidents occurred during the Existing Development, therefore, no potential for in-combination effects. Accordingly,

			with the Wind Farm Site and Grid Connection Site; the constructed Grid Connection is located within a portion of the N15. There were no impacts to utilities e.g. watermain that are located within the N15 road during the laying of the Grid Connection. No traffic related accidents or incidents occurred on the N15 that were related to the construction of the Existing Development. No turbine deliveries occurred during the construction of the Existing Development. The residual effect on/from traffic incidents from the construction of the Existing Development is Not Significant.	the potential for in-combination effects arising from the Subject Development is considered to be Not Significant.
	Contamination	There is a potential risk of contamination from site activities from the Prospective Development. The risk of contamination was given a risk score of 4 on a precautionary basis. Chapter 8 Land, Soils and Geology Section 8.6, and Chapter 9 Water, Section 9.5 outline mitigation measures which will be put in place to reduce the risk of accidental spillage and contamination of pollution risk to soils, groundwater, surface	Best practise measures were implemented on site for the handling/refuelling and removal of hazardous materials on/off site were adhered to at all times during the construction of the Existing Development, reducing the likelihood of contamination of soils, ground, and surface waters. An Emergency Plan was	The risk of contamination associated with both the Prospective Development and Existing Development are considered as Not Significant. There is no temporal overlap between the Prospective Development and the Existing Development and therefore the risk of contamination for the Subject Development is the same as the risk arising from the Prospective

		water and associated ecosystems, and to terrestrial ecology. The conclusions in the relevant chapters of the EIAR state that there will be No Significant Effects.	in place should a potential leakage or spill occur to minimise the effects of the incident immediately should it occur. As a result, the likelihood of contamination was low, and no incidents of contamination occurred at the Wind Farm Site and Grid Connection Site during the construction of the Existing Development. The residual effect to/from the contamination due to the construction of the Existing Development is Not Significant.	Development. As such, there is no potential for an in cumulation effect. The potential for In-Cumulation effects from the Subject Development is Not Significant.
	Fire / Explosion	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 Prospective Development will be designed, built and operated in line with current best practice. The risk of fire occurring at the Prospective Development resulting in a major accident and/or disaster was given a risk score of 4 on a precautionary basis. This indicates a scenario that is 'very unlikely' to occur and having 'limited' consequences should it do so, representing a 'low-risk scenario' during the construction, operational and decommissioning phases. Therefore, there is No Significant Effect.	Best practise measures were implemented onsite, and An Emergency Plan was in place to deal with potential fire outbreaks. Adherence to these measures in conjunction with the nature of the Wind Farm Site and Grid Connection Site and the Existing Development design meant that the likelihood of fire outbreak and subsequent spread was low. There were no incidents of fire at the Wind Farm Site and Grid Connection Site during the construction of the Existing Development. The residual effect to/from fire during the construction of the Existing Development is Not Significant.	The risk of fire/explosion associated with both the Prospective Development and Existing Development are considered as Not Significant. There is no temporal overlap between the Prospective Development and the Existing Development and therefore no potential for an in cumulation effect. The potential for In-Cumulation effects from the Subject Development is Not Significant.

	Collapse / damage to structures	As stated in Section 16.3 and Appendix 16-1, buildings in Ireland are extremely unlikely to be damaged or collapse due to seismic activity. As outlined in Chapter 8 Land, Soils and Geology, and Appendix 8-1 Peat Stability Assessment of the EIAR, the findings of the peat assessment showed that the Prospective Development works have a low risk of landslide. 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. 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. Based on the above and the conclusions in the relevant chapters of the EIAR, there will be No Significant Effects.	Given the nature of the Existing Development, the potential for structural damage or collapse was low. During the peat slide, there was damage to a segment of constructed floating road. However, there was no impact or damage to any completed building onsite or in the surrounding landscape. The residual effect to/from collapse/damage to structures during the construction of the Existing Development was Not Significant.	The risk of collapse/damage to structure associated with both the Prospective Development and Existing Development are considered as Not Significant. There is no temporal overlap between the Prospective Development and the Existing Development and therefore no potential for an in cumulation effect. The potential for In-Cumulation effects from the Subject Development is Not Significant.

16.7

Cumulative Risk Assessment – Subject Development

This section considers the cumulative risk of the Subject Development with all relevant other plans and projects. Table 16-12 above details the residual in-cumulation effects of the Subject Development.

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

All elements of the Subject Development were assessed to identify any cumulative effects. as detailed above, a wind farm including all its various components including the grid connection works, substation, roads, turbines etc is not a recognised source of pollution.

No significant effects relating to severe weather, flooding, traffic incidents, contamination, fire/explosion, or collapse/damage to structures was identified during the construction phase of the Existing Development, and the risk of these incidents to or from the Prospective Development is low. Peat instability did occur during the construction of the Existing Development. While this resulted in localised environmental effects at the time of occurrence, the implementation of the emergency works and, onsite remediation works as detailed in the rEIAR have been effective in reducing both the likelihood and potential consequences of further peat instability events, and the residual effect is assessed as Not Significant.

There is low potential for significant natural disasters to occur at the Site.

The Subject Development has low potential to cause natural disasters or major accidents. There is no real likelihood of significant environmental effects cumulatively associated with the Subject Development's potential to cause accidents or natural disasters.

Following a detailed assessment of the potential for any further impact when considered in combination with any or all of the plans and projects set out in set out in Chapter 2 Background and Policy, Section 2.9 of this EIAR and Section 2.9 of Chapter 2 Background and Policy of the rEIAR, the Subject Development, with mitigation measures in place, was found to have no potential for significant in-combination or cumulative effects associated with the potential for the project to be impacted by major accidents and/ or natural disasters or the Subject Development potential to cause major accidents and/ or natural disasters. This is based on the low risk associated with the Subject Development described in this Chapter of the EIAR and Chapter 16 of the rEIAR and a review of the nature of the surrounding land uses and projects existing or intended in the surrounding area. Therefore, the cumulative residual effect of the Subject Development to cause or be impacted by major accidents and natural disasters is not significant.

16.8

Transboundary Risk Assessment

This section considers the potential for transboundary effects as a result of the Subject Development. Table 16-13 below details the residual effects of the Subject Development, and the potential for which the Subject Development could affect a different jurisdiction.

Table 16-13 Assessment of potential Transboundary Effects of the Subject Development

Topic		Prospective Development	Existing Development	Subject Development
Population	Critical Infrastructure Emergencies	The potential for transboundary effects from Critical Infrastructure Emergencies are considered within the Risk Assessment for the Prospective Development and will be Not Significant. There is no potential for Significant Transboundary Effects from the Prospective Development	Severe weather events may result in critical infrastructure emergencies such as traffic incidents. No severe weather-related critical infrastructure emergencies were reported and no turbines were delivered to the Wind Farm Site during the construction phase of the Existing Development. Nonetheless, weather monitoring including rainfall was undertaken during the construction of the Existing Development and works halted during periods of heavy rainfall or high winds. The transboundary effects to/from critical infrastructure emergencies during the construction of the Existing Development was Not Significant.	No potential for Significant Transboundary Effects from the Subject Development
	Severe Weather	Severe weather events may result in major accident scenarios such as flooding, leading to the mobilisation of contaminants within and beyond the site and, potentially, across jurisdictional boundaries. These may be transported via hydrological pathways to downstream receptors. Due to Ireland's geographic location and temperate climate, weather extremes are unlikely. Weather monitoring will be undertaken during the construction of phase of the Prospective	Severe weather events may result in major accident scenarios such as flooding, leading to the mobilisation of contaminants. These may be transported via hydrological pathways to downstream receptors within and beyond the site and, potentially, across jurisdictional boundaries. No severe weather-related incidents were reported during the construction phase of the	No potential for Significant Transboundary Effects from the Subject Development

		Development to ensure no ground works will occur during periods of extreme wind or rainfall. Therefore, the transboundary effects from the construction, operation or decommissioning of the Prospective Development due to severe weather will be Not Significant.	Existing Development and due to Ireland's geographic location and temperate climate, weather extremes are unlikely. Nonetheless, weather monitoring including rainfall was undertaken during the construction of the Existing Development and works halted during periods of heavy rainfall or high winds. The transboundary effects to/from severe weather during the construction of the Existing Development was Not Significant.	
	Flooding	Floodwaters may enter local drainage networks and watercourses which are hydrologically connected to downstream river systems that extend beyond the site and, potentially, across jurisdictional boundaries. The likelihood of flooding to/from the Prospective Development during its construction, operation and decommissioning is considered Low (refer to Appendix 9-1 Flood Risk Assessment) and due to the comprehensive drainage design for the Prospective Development. Therefore, the transboundary effects to/from flooding during the construction of the Prospective Development is Not Significant.	Floodwaters may enter local drainage networks and watercourses which are hydrologically connected to downstream river systems that extend beyond the site and, potentially, across jurisdictional boundaries. The likelihood of flooding to/from the Existing Development during its construction was low. There were no flooding-related incidents during the construction of the Existing Development, including the laying of the grid connecting cabling, which is located within the N15, where two flood zone areas are recorded. <i>Therefore, the transboundary effects to/from flooding during the construction of the Existing Development was Not Significant.</i>	No potential for Significant Transboundary Effects from the Subject Development
	Peat Stability	The findings of the Appendix 8-1 Peat Stability Assessment of the EIAR showed that all of the Prospective Development infrastructure elements are located in areas of low risk. Notwithstanding the above, the management of peat stability and appropriate construction practices will be inherent in the construction phase of the Prospective	An assessment of the effects of the Existing Development and peat slide on the River Foyle and Tributaries (ASSI229) (UK), and associated species was undertaken and concluded <i>that following the implementation of mitigation and through the passage of time, no significant residual effects on any of the identified</i>	No potential for Significant Transboundary Effects from the Subject Development

		Development to ensure peat failures do not occur on site. Therefore, the transboundary effects from Peat instability due to the construction, operation and decommissioning of the Prospective Development are Not Significant.	<i>watercourses and associated aquatic habitats and species were identified.</i> <i>The Peat Stability Report 2026 concludes that the likelihood of a landslide from the Existing Development is low.</i> <i>Therefore, the transboundary effects from Peat instability at the Site were Not Significant.</i>	
	Traffic Incident	Traffic-related accidents, including collisions involving vehicles transporting fuels, chemicals, or hazardous materials, represent a potential major accident scenario. Construction materials, aggregates and waste removal plant and machinery required for the construction of the Prospective Development will not require crossing the border. There may be some construction staff travelling to the Site from across the border during the short-term construction phase. The likelihood of traffic-related accidents involving staff vehicles is considered low, taking into account that all drivers are required to hold valid licences, comply with the Rules of the Road, and adhere to established best practice in relation to road safety. The transboundary effects from low numbers of construction staff travelling across	Traffic-related accidents, including collisions involving vehicles transporting fuels, chemicals, or hazardous materials, represent a potential major accident scenario. Construction materials, aggregates and waste removal plant and machinery required for the construction of the Existing Development did not require crossing the border. There may have been some construction staff travelling to the Site from across the border during the short-term construction phase. There were not traffic related incidents during the construction of the Existing Development. The transboundary effects from low numbers of construction staff travelling across the border to the Site was Not Significant.	No potential for Significant Transboundary Effects from the Subject Development
	Contamination	Accidental releases of hazardous materials (e.g. fuels, oils, or chemicals) represent a potential major accident scenario, which could result in contamination of soils, surface water, and groundwater within and beyond the site and, potentially, across jurisdictional boundaries. Best practise measures will be implemented onsite for the handing/refuelling and removal of hazardous materials on/off site at all times during the construction of the Prospective Development,	Accidental releases of hazardous materials (e.g. fuels, oils, or chemicals) represent a potential major accident scenario, which could result in contamination of soils, surface water, and groundwater within and beyond the site and, potentially, across jurisdictional boundaries. Best practise measures were implemented on site for the handing/refuelling and removal of hazardous materials on/off site at all times during the construction of the Existing	No potential for Significant Transboundary Effects from the Subject Development

		reducing the likelihood of contamination of soils, ground, and surface waters. An Emergency Plan will be in place should a potential leakage or spill occur to minimise the effects of the incident immediately (Refer to Appendix 4-3 CEMP). As a result, the likelihood of contamination is low and therefore the likelihood of transboundary effects are low. Therefore, the transboundary effects from contamination of soils, surface and groundwater at the Site is Not Significant.	Development, reducing the likelihood of contamination of soils, ground, and surface waters. An Emergency Plan was in place should a potential leakage or spill occur to minimise the effects of the incident immediately. As a result, the likelihood of contamination was low, and no incidents of contamination occurred at the Site during the construction of the Existing Development. Therefore, the transboundary effects from contamination of soils, surface and groundwater at the Site were Not Significant.	
	Fire / Explosion	Fire or explosion represents a potential major accident scenario, which may result in the release of smoke, and potentially hazardous materials depending on weather conditions, beyond the site and across jurisdictions. Best practise measures will be implemented onsite, and an Emergency Management Plan was in place to deal with potential fire outbreaks. Adherence to these measures in conjunction with the nature of the Site and the Prospective Development design meant that the likelihood of fire outbreak and subsequent spread was low. Therefore, the transboundary effects from fire at the Site are Not Significant.	Fire or explosion represents a potential major accident scenario, which may result in the release of smoke, and potentially hazardous materials depending on weather conditions, beyond the site and across jurisdictions. Best practise measures were implemented onsite, and an Emergency Management Plan was in place to deal with potential fire outbreaks. Adherence to these measures in conjunction with the nature of the Site and the Existing Development design meant that the likelihood of fire outbreak and subsequent spread was low. There were no incidents of fire at the Site during the construction of the Existing Development. Therefore, the transboundary effects from fire at the Site were Not Significant	No potential for Significant Transboundary Effects from the Subject Development
	Collapse / damage to structures	Structural failure, including the collapse or damage of wind turbines or associated infrastructure, could occur during construction, operation, or decommissioning. Such events would be highly localised. Due to the setback distance from any	Given the nature of the Existing Development, there was no potential for a collapse or damage to infrastructure across the border, therefore transboundary effects are Not Significant	No potential for Significant Transboundary Effects from the Subject Development

		proposed onsite activities and set back distance from an proposed tall structure, there is no potential for interaction with any existing or proposed structures across the border. Therefore, transboundary effects from a collapse or damage to infrastructure is Not Significant		
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