16. MAJOR ACCIDENTS AND NATURAL DISASTERS

16.1 Introduction

This chapter of the remedial Environmental Impact Assessment Report (rEIAR) describes the effects on the environment arising from the vulnerability of the Existing Development as detailed in Chapter 4: Description of the Existing Development, to risks of major accidents and/or natural disasters, as well as the potential of the Existing Development itself to have caused 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 Assessment Reports'* (EPA, 2022) (hereafter referred to as the EPA Guidelines), and the European Commission in relation to Environmental Impact Assessment of Projects (Directive 2011/92/EU, as amended by 2014/52/EU), namely '*Guidance on the preparation of the Environmental Impact Assessment Report'* (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 rEIAR, 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' or 'proposed turbine locations'. Please see Section 1.1.1 of this rEIAR for further details. A detailed description of the Existing Development is provided in Chapter 4 of this rEIAR.

Major accidents or natural disasters are hazards which would have had the potential to affect the Existing Development and led to environmental effects directly or indirectly, or the potential for the Existing Development to have caused environmental effects. These include accidents that could have occurred during construction of the Existing Development caused by operational failure and/or natural hazards. The assessment of the vulnerability of the Existing Development to major accidents and natural disasters, as well as the risk of the Existing Development itself to have caused major accidents and/or natural disasters is carried out in compliance with the Environmental Impact Assessment (EIA) Directive (2014/52/EU) as amended, Article 3(2), which states the need to assess:

> *'the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned.'*

In addition, Annex IV of the EIA Directive states that the EIAR shall contain:

> *"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 natural disasters which are relevant to the project concerned."*

The objective of this assessment, as set out in Recital 15 of the EIA Directive (2014/52/EU) as amended, is to ensure that appropriate precautionary actions are taken for those projects, or in this case of the rEIAR, that appropriate precautionary actions were in place at the time of construction of the Existing Development:

> *"...because of their vulnerability to major accidents and/or natural disasters, are likely to have significant adverse effects on the environment."*

Based on the requirements of the EIA Directive (2014/52/EU) as amended, this chapter seeks to determine:

- The relevant major accidents and/or natural disasters, if any, that the Existing Development could have been vulnerable to;
- If any major accidents and/or natural disasters occurred that were caused by the Existing Development or that impacted on the Existing Development.
- The potential for these major accidents and/or natural disasters to have resulted in likely significant adverse environmental effect(s);
- The measures that were in place, or needed 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 disasters considers all factors defined in the EIA Directive that have been considered in this 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.

16.1.1 Statement of Authority

This section of the rEIAR has been prepared by both by Thomas Blackwell with input from Emma Prior. It has been reviewed by Sean Creedon.

Thomas is a Senior Environmental Consultant with over 20 years of progressive experience in environmental consulting. Thomas' professional experience includes managing Environmental Impact Assessment Reports, environmental permitting, environmental due diligence and compliance, and general environmental assessment on behalf of clients in the renewable energy, mining, solid waste management, residential and commercial development, and public sectors. Thomas also has extensive experience in environmental and ecosystem restoration design, project management, and construction oversight. Thomas' multi-sector experience working on projects in multiple jurisdictions has allowed him to develop a wealth of knowledge and understanding of the challenges involved in guiding complex project through the regulatory and planning process.

Emma Prior is an Environmental Scientist with MKO, with over a year's experience in private consultancy, having joined the company in September 2024. Emma holds a first-class Honours BA (Hons) in Geography & Human Development from Dublin City University and a Master of Science Degree in Environmental Resource Management from University College Dublin achieving a first-class honours Thesis. Emma's key strengths and areas of expertise are in environmental geography, field research, communication, and teamwork. Emma is skilled in report writing and QGIS mapping, with experience across a diverse range of projects including wind farms, wastewater treatment plants, quarries, and residential developments. Since joining MKO, Emma has experience in the preparation of EIA Scoping Reports, Construction Environmental Management Plans, EIA Screening Determinations, EIA Report Chapters including assessments, and Environmental fieldwork including surface and groundwater monitoring.

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 rEIAR 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 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 provided the following information for each:

Table 16-1: Topics to be addressed as per HSE Scoping Response, relevant to this chapter.

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

Fáilte Ireland

A scoping response was received from Failte Ireland on the 21st October 2025 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 to the Existing Development or could have occurred during its construction are discussed in Section 16.4 of this rEIAR and the EIAR. Mitigation measures in place at the Wind Farm Site and Grid Connection Site are discussed in Section 16.4.2. An Emergency Response Plan can be found in Section 6 of the 2019 CEMP (Appendix 4-4) of this rEIAR and Appendix 4-3 CEMP of the EIAR.

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 Foyles 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 addressed as per HSE Scoping Response, relevant to this chapter.

Topic		Location in 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 Existing Development of this rEIAR, Section 4.9 Chapter 4 Description of the Prospective Development of the EIAR, Appendix 4-3 2019 CEMP of this rEIAR, Appendix 4-3 CEMP of the EIAR
	Pollution Prevention Plan,	Appendix 4-3 2019 CEMP of this rEIAR, Appendix 4-3 CEMP of the EIAR
	Site Drainage Plan, including details of Sustainable Drainage Systems (SuDS),	Section 4.9 Chapter 4 Description of the Existing Development of this rEIAR, Section 4.9 Chapter 4 Description of the Prospective Development of the EIAR, Appendix 4-3 2019 CEMP of this rEIAR, Appendix 4-3 CEMP of the EIAR
	Environmental Emergency Plan,	Appendix 4-3 2019 CEMP of this rEIAR, Appendix 4-3 CEMP of the EIAR
	Water Quality Monitoring Plan	Section 4.9 Chapter 4 Description of the Existing Development of this rEIAR, Section 4.9 Chapter 4 Description of the Prospective Development of the EIAR, Appendix 4-3 2019 CEMP of this rEIAR, Appendix 4-3 CEMP of the EIAR
	Mitigation measures to be put in place to protect otter and salmon communities	Chapter 6 Biodiversity of this rEIAR and Chapter 6 Biodiversity of the EIAR
	Details of the appointment of an Ecological Clerk of Works (ECoW), detailing their roles and responsibilities.	Appendix 4-3 2019 CEMP of this rEIAR, Appendix 4-3 CEMP of the EIAR

Topic	Location in rEIAR
Details of the proposed works that are within/adjacent/hydrologically connected to any designated sites.	Section 4.9 Chapter 4 Description of the Existing Development of this rEIAR, Section 4.9 Chapter 4 Description of the Prospective Development of the EIAR, Appendix 4-3 2019 CEMP of this rEIAR, Appendix 4-3 CEMP of the EIAR Chapter 6 Biodiversity of this rEIAR and Chapter 6 Biodiversity of the EIAR
A Habitats Regulations Assessment should be conducted to determine the potential impact to nearby European Sites.	Chapter 6 Biodiversity of this rEIAR and Chapter 6 Biodiversity of the EIAR, remedial Natura Impact Statement (rNIS) and Natura Impact Statement (NIS)

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 Wind Farm Site and Grid Connection Site and highlighted that a portion of the Wind Farm Site and Grid Connection 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 Wind Farm Site and Grid Connection Site falls across a range of groundwater vulnerabilities. The response acknowledged that a peat slide occurred within the Wind Farm 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 pre-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 2025 Peat Stability Assessment Report: Meenbog Wind Farm (Existing Development) and Appendix 8-1 Meenbog Wind Farm (Prospective Development) Peat Stability Assessment Report of the EIAR.

16.2 Assessment Methodology

This risk assessment focuses on the works constructed to date at the Wind farm Site and Grid Connection Site, i.e. the Existing Development and the potential for it to cause major accidents or disasters during its construction. Likewise, it also considers its potential vulnerability to major accidents and disasters. This risk assessment is undertaken on the basis that the Existing Development was constructed following the construction methodologies detailed in Chapter 4 of the rEIAR and the revised construction methodologies report produced in August 2021 by MCE Ltd (Appendix 4-7).

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 rEIAR assessment chapters (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 Existing Development
- Cumulative Risk Assessment of the Existing Development
- In-cumulation Risk Assessment of the Existing Development and the Prospective 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 also used in the preparation of this section of the rEIAR:

- Central Statistics Office (2016) *Census of Population 2016*. Dublin: Central Statistics Office.
- Central Statistics Office (2022) *Census of Population 2022*. Dublin: Central Statistics Office.
- Department of Defence (2021) *A National Risk Assessment for Ireland*. Dublin: Department of Defence.
- Department of Health Northern Ireland (2024) *Emergency Response Plan V5.5*. Belfast: Department of Health.
- Department of the Taoiseach (2024) *National Risk Assessment 2024*. Dublin: Government of Ireland.
- Donegal County Council (2018) *County Donegal Development Plan 2018–2024 (as varied)*. Lifford: Donegal County Council.
- Donegal County Council (2023) *Major Emergency Plan*. Lifford: Donegal County Council.
- Donegal County Council (2024) Climate Action Plan 2024-2029.
- Donegal County Council (2024) *Donegal County Development Plan 2024–2030*. Lifford: Donegal County Council.
- Environmental Protection Agency (EPA) Maps.[1]
- Fehily Timoney (2017) Peat Stability Assessment Report for Meenbog Wind Farm, Co. Donegal. [Report] December 2017. Prepared by AGEC
- Fehily Timoney (2021) Peat Stability Assessment of Meenbog Wind Farm Site. [Report] 2021. Prepared by Fehily Timoney (Appendix 8-2)
- Fehily Timoney (2026) Peat Stability Assessment Meenbog Wind Farm Existing Development (Appendix 8-1)
- Geological Services Ireland (GSI) Map viewer.[2]
- 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.
- MCE Ltd. (2021) Construction Responses to Fehily Timoney Mitigation Measures. [Report] August 2021. Prepared by MCE Ltd. (Appendix 4-6 of this rEIAR).
- Northern and Western Regional Assembly (2020) *Regional Spatial and Economic Strategy (RSES) 2020–2032*. Ballaghaderreen: Northern and Western Regional Assembly.

[1] https://gis.epa.ie/EPAMaps/
[2] https://geodata-gov-ie.maps.arcgis.com/apps/webappviewer/index.html?id=be808e49f2be4808bd4e2e60820fa856

- Rialtas na hÉireann (2024) *National Risk Assessment: Overview of Strategic Risks*. Dublin: Government of Ireland.

16.2.2 Legislation and Guidance

16.2.2.1 Legislation

The rEIAR is prepared in accordance with the requirements of European Union Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the 'EIA Directive') as amended by Directive 2014/52/EU. The requirements of the following legislation are complied with:

- Directive 2011/92/EU and Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (EIA Directive), including Circular Letter PL 1/2017 on the implementation of Directive 2014/52/EU.
- Planning and Development Act 2000, as amended.
- Planning and Development Regulations 2001 (S.I. No. 600 of 2001), as amended.
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).
- European Communities (Environmental Impact Assessment) Regulations 1989 (S.I. No. 349 of 1989), as amended.
- Heritage Act 1995, as amended.

The information relevant to major accidents and/or disasters to be included in the rEIAR is set out in paragraph 8 of Annex IV of the EIA Directive (2014/52/EU) as amended as follows:

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

16.2.2.2 Guidance Documents

This chapter has been prepared in accordance with the following guidance:

- 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 Assessment*[3]
- Department of the Taoiseach (2024). *National Risk Assessment 2024 – Overview of Strategic Risks*[4]

[3] *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*
[4] *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*

- Environmental Protection Agency (2014) *Guidance on Assessing and Costing Environmental Liabilities*[5]
- Environmental Protection Agency (2022) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*[6].
- European Commission (2017) *Environmental Impact Assessment of Projects: Guidance on the Preparation of Environmental Impact Assessment Reports*[7].
- Health and Safety Authority (n.d.) *Guidance on Health and Safety in the Renewable Energy Sector.*
- Scottish Government (2017) *Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Developments. Edinburgh: Scottish Government.*

16.2.3 Categorisation of the Baseline Environment

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

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

16.2.4 Impact Assessment Methodology

16.2.4.1 Site-Specific Risk Assessment Methodology

A site-specific risk assessment identifies and quantifies risks, focusing on unplanned, but possible and plausible events that could have occurred during the construction of the Existing Development. The approach to identifying and quantifying risks associated with the Existing Development by means of a site-specific risk assessment is derived from the EPA document '*Guidance on Assessing and Costing Environmental Liabilities*'[8]. The following steps were taken as part of the site-specific risk assessment:

- Risk identification;
- Risk classification, likelihood and consequence; and
- Risk evaluation.

16.2.4.1.1 *Risk Identification*

Risks have been reviewed through the identification of risks that could have occurred, and those that did occur, during the construction of the Existing Development. The identification of risks has focused on non-standard but plausible incidents that could have occurred, or that did occur, at or as a result of the Existing Development during its construction.

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

[5] *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*
[6] *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*
[7] *EC (2017). Environmental Impact Assessment of Projects – Guidance on the preparation of Environmental Impact Assessment Reports. Available at: https://albertslund.dk/media/4wyitnqv/eu_2017_environmental-impact-assessment-of-projects-guidance-on-the-preparation-of-the-environmental-impact-assessment-repo.pdf*
[8] EPA (2014) *Guidance on assessing and costing environmental liabilities. https://www.epa.ie/publications/compliance--enforcement/licensees/reporting/financial-provisions/EPA_OEE-Guidance-and-Assessing-WEB.pdf*

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

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 risks and RWCS, the likelihood of occurrence of each risk has been assessed. An analysis of safety procedures and environmental controls that were implemented during the construction of the Existing Development 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.

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* [9]

Classification of Impact

The impact rating assigned to each risk (if the risk had occurred) has assumed that all mitigation measures and/or safety procedures failed to prevent the major accident and/or disaster. The risk assessment also considers whether the hazard occurred during the construction of the Existing Development. The consequence of the impact, if such an impact had occurred, has been assigned as described in Table 16-4. The impact of a risk to/from the construction Existing 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.

[9] *Australian National Emergency Risk Assessment Guidelines (2020) Available at: https://knowledge.aidr.org.au/resources/handbook-nationalemergency-risk-assessment-guidelines/*

Table 16-4 Consequence 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

Impact Category	Significance of Effects	People	Environment	Essential Services	Social
5 Very High Impact	Profound	Deaths greater than 1 in 20,000 people for population of interest OR Critical injuries/illness greater than 1 in 20,000	Very heavy contamination, widespread effects of extended duration	Loss of delivery of services essential for the maintenance of vital societal functions or economic activities	Community unable to function without support

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 Existing 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

A desk study was conducted to establish the baseline environmental conditions at the Wind Farm Site and Grid Connection Site during the construction of the Existing Development.

16.3.1 Baseline Wind Farm Site and Grid Connection Site Conditions

Proximity to Residential Receptors

Residential receptors in the surrounding area primarily consist of detached, one-off residential dwellings distributed along the N15. There are 16 no. receptors identified within a 100 m buffer of the Grid Connection, with the closest receptor being approximately 10m from the Grid Connection. There are 6 no. receptors identified within a 1 km buffer of the Wind Farm Site with the closest residential receptor being 70 metres.

Proximity to Amenities/Public Venues

The nearest public facility is Biddys O Barnes, a public house and guest house located 100m south of the Grid Connection. There are no schools, places of worship or sporting grounds within 2km of the Wind Farm Site and Grid Connection Site.

Proximity to Protected Sites

The Cashelnavean Bog Natural Heritage Area (NHA) is located west of the N15, to the northwest of the Site with a portion of it overlapping with the Grid Connection and existing site entrance. A portion of the Croaghonagh Bog Special Area of Conservation (SAC) falls within the Wind Farm Site and is located adjacent to a pre-existing road that was used during the construction of the Existing Development. The Lough Eske and Ardnamona Wood SAC is located adjacent to the N15 within which the Grid Connection was constructed.

Proximity to Major Infrastructure

The nearest nationally important strategic infrastructure is the N15 National Road falls within the Grid Connection Site. The existing Grid Connection exits the Wind Farm Site and follows the N15 National Road southwest for approximately 6km, before exiting the N15 National Road onto the L-2595 Local Road.

Climate

Ireland is a geologically stable country with a temperate, oceanic climate, resulting in mild winters and cool summers. The dominant influence on Ireland's climate is the Atlantic Ocean. Consequently, Ireland does not suffer from the extremes of temperature experienced by many other countries at similar latitude. The hills and mountains, many of which are near the coasts, provide shelter from strong winds and from the direct oceanic influence.

Seismic Activity

There is a low potential for significant natural disasters to occur at the Wind Farm Site and Grid Connection Site. 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 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 have posed a risk to developments similar to the Existing Development in other geographic locations, were and are, of a low likelihood of occurrence, and were and are, less likely to be of a significant magnitude in order to cause an accident or disaster. No such incidents were recorded during the construction phase of the Existing Development.

Peat Stability/Landslide

A comprehensive Geotechnical and Peat Stability Risk Assessment (Appendix 16-2 'Peat Stability Assessment Report' prepared by AGEC in December 2017 (AGEC, 2017), was undertaken for the Wind Farm Site which concluded that the Wind Farm Site had an acceptable margin of safety and was suitable for the Existing Development. The findings included recommendations and control measures for construction work in peat lands to ensure that all works adhered to an acceptable standard of safety. Notwithstanding these findings, during the construction phase of the Existing Development, peat failures and minor peat instabilities occurred in early June 2020 or before, within the Wind Farm Site. These comprised translational slides of peat that were triggered by arisings (mostly peat) being placed on in situ peat, or failed peat. Following these peat failures, a range of mitigation measures were carried

out by the contractor to limit further peat failures. On the 12th November 2020, during the construction of an access road to Turbine No. 7 (T07), a peat slide occurred which originated within the east of the Wind Farm Site. A comprehensive review of the construction methodologies being employed on-site was also undertaken following the November 2020 Peat Slide. The subsequent document titled 'Construction Responses to Fehily Timony Mitigation Measures', was prepared by MCE Ltd. in August 2021 (MCE, 2021) to accompany the Fehily Timoney report 'Peat Stability Assessment of Meenbog Wind Farm Site' (FT, 2021). The MCE (2021) document outlined additional mitigation measures and revised construction methodologies to be utilised during the construction of the outstanding elements required to complete the wind farm. These measures and methodologies have been implemented for all construction activities undertaken on-site since publication of the MCE (2021) document. The 'Construction Responses to Fehily Timony Mitigation Measures' document is included as Appendix 4-7 to this rEIAR. An updated 2026 Peat Stability Assessment Report is included in Appendix 8-1 of this rEIAR.

Proximity to SEVESO Sites

The Existing 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 was no effect 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 closest SEVESO site to the Existing Development is European Refreshments (trading as Ballina Beverages) situated on Killala Road, Ballina, Co. Mayo, approximately 97 km southwest of the Wind Farm Site and Grid Connection Site.

Flooding

The OPW Past Flood Events Maps have no records of recurring or historic flood instances within the Wind Farm Site. Similarly, identifiable text on local available historical 6" or 25" mapping does not identify any lands that are "liable to flood". There is one mapped historic flood event located ~4.24 km to the southwest of the Wind Farm Site (Flood ID: 4194) that is of no consequence to the Existing Development.

The GSI's Winter 2015/2016 Surface Water Flood Map shows surface water flood extents for this winter flood event. This flood event is recognised as being the largest flood event on record in many areas. The flood map for this event records 1 no. surface water flood zone within the south of the Wind Farm Site. This area has the possibility of flooding again if there is similar heavy rainfall to 2015/2016 winter. However, this flood zone is not in the vicinity of the Existing Development. No CFRAM mapping has been completed for the area of the Wind Farm Site.

The National Indicative Fluvial Flood Map for the Present-Day Scenario maps a flood zone within the east of the Wind Farm Site along the Bunadaowen River. The flood zones from this river are constrained to be immediate vicinity of the channel and do not encroach upon the Existing Development. Surface water ponding/pluvial flooding may occur in some flat areas of the Wind Farm Site due to the presence of low permeability peat at the surface.

With regards to the Grid Connection, the OPWs Past Flood Events Map records the presence of a recurring flood event (Flood ID: 4194) on the Lowerymore River near Barnesmore Gap in close proximity to the Grid Connection along the N15 National Road.

CFRAM mapping has not been completed for the area of the Grid Connection. The GSI's Winter 2015/2016 Surface Water Flood Map does not record any historic flood zones along the Grid Connection.

The National Indicative Fluvial Flood Map for the Present-Day Scenario maps fluvial flood zones along the Lowerymore River adjacent to the Grid Connection. The flood zones are constrained to the

immediate vicinity of the river channel to the east of the N15. The flood zones do overlap with the N15 and therefore constructed Grid Connection at the existing watercourse crossings located at Barnes Bridge and Keadew Bridge.

In summary, the risk of flooding at the Wind Farm Site is low due to the elevated and sloping nature of the land and the high density of forestry drains and natural streams which flow downslope. Apart from the minor overlap of flood zones with the N15 (as discussed above), the Grid Connection Site is at low risk of flooding.

Chapter 9: Hydrology & Hydrogeology details the risk of flooding that existed within the Wind Farm Site. A Flood Risk Assessment of the Wind Farm Site and Grid Connection Site has been carried out by Hydro-Environmental Servies (HES). Refer to Chapter 9: Hydrology & Hydrogeology and Appendix 9-1 of this rEIAR for further details.

16.3.2 DCC Major Emergency Plan 2023-Site Specific Risks

The functional area of Donegal County Council, and therefore the Existing Development falls under the West and North West Regional Major Emergency Plan region. The Major Emergency Plan prepared by Donegal County Council (2023)[10] 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
  - 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 Plan[11] 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 Existing Development are described below.

[10] *Donegal County Council Major Emergency Plan 2023* https://www.donegalcoco.ie/media/df1n5bji/donegal-mep-2023-public-version.pdf
[11] *Donegal County Council Local Authority Climate Action Plan 2024-2029. Available at:* https://www.donegalcoco.ie/media/s2cpk5y5/climate-action-plan-english-web-version-v2-1.pdf

Severe Weather Event

As discussed in Section 16.3 above, Ireland has a temperate oceanic climate, characterised by cool summers and mild winters. The Weather Station in Malin Head, Co. Donegal, run by Met Éireann, is the nearest weather and climate monitoring station to the Existing Development that has meteorological data recorded for the 30-year period from 1991-2020. The monitoring station is located approximately 78km north of the Existing Development.

The wettest months recorded at Malin Head over the 30-year period are January, November and December and December, with April and May being the driest. August is the warmest month with an average temperature of 14.8° Celsius. The windier part of the year lasts for approximately 3 months from December to February, with average wind speeds of approximately 9.2kilometres/hour (km/h). The windiest month of the year recorded at the Malin Head station is January, with an average hourly wind speed of 9.4km/h. The calmer time of year lasts for 4 months, from May to August, with an average wind speed between 6.9km/h in May and 6.5km/h in August. As shown, wind speeds show little variation throughout the year, with a mean annual windspeed of 7.8km/h.

The works programme for the construction stage of the Existing Development took into account weather forecasts and works were suspended in the case of extreme weather events. The following forecasting and weather warning systems were available and used on a daily basis at the Wind Farm Site and Grid Connection Site and used during construction activities:

- General Forecasts: Available on a national, regional, and county level from the Met Eireann website (www.met.ie/forecasts). These provided general information on weather patterns including rainfall, wind speed and direction but did not provide any quantitative rainfall estimates;
- Weather Warning or Advisories: Met Éireann's main suite of warnings are issued by the duty forecaster between 10am and midday and are updated as necessary as new information becomes available. In general, warnings are not issued more than 60-hours ahead of the expected adverse weather but advisories on potential hazards are issued up to a week in advance. The three warning categories are:
    - Yellow: Not unusual weather. Localised danger.
    - Orange: Infrequent. Dangerous/disruptive.
    - Red: Rare. Extremely dangerous/destructive.
- MeteoAlarm: Alerts to the possible occurrence of severe weather for the next 2 days. Less useful than general forecasts as only available on a provincial scale;
- 3-hour Rainfall Maps: Forecast quantitative rainfall amounts for the next 3 hours but does not account for possible heavy localised events;
- Rainfall Radar Images: Images covering the entire country are freely available from the Met Eireann website (www.met.ie/latest/rainfall_radar.asp). The images are a composite of radar data from Shannon and Dublin airports and give a picture of the current rainfall extent and intensity. Images show a quantitative measure of recent rainfall. A 3-hour record is given and is updated every 15 minutes. Radar images are not predictive; and
- Consultancy Service: Met Eireann provide a 24-hour telephone consultancy service. The forecaster will provide interpretation of weather data and give the best available forecast for the area of interest.

Wildland Fires

Ireland historically is unlikely to experience widespread forest fires, with gorse fires more common. However, due to climate change, forest fires have been more common in recent years. In Ireland there can be a high risk of fires from the end of February until October. The Irish Meteorological Service produces a Fire Weather Index, using a Canadian Model, which assesses the fire risk in an area daily,

taking into account current and past weather conditions. It also uses forecast weather information to produce a forecast index. The Fire Index is available all year from the Met Éireann website. At the time of writing, the Fire Index across the month of March 2026 was predominantly low. No fires, natural or accidental occurred at the Wind Farm Site and Grid Connection Site during the construction of the Existing Development. The likelihood of fire occurring was minimised and considered low by the implementation of good site management practices during the construction phase.

16.3.2.2 Civil

Water Contamination

Without appropriate mitigation and best practise measures in place, the Existing Development could have had the potential to cause contamination of soils, groundwater, and surface water during the construction phase. Key risks included hydrocarbon releases from refuelling activities, earthworks, and excavations. Accidental spills during refuelling and the cumulative effect of minor leaks from routine plant use posed pollution risks, while larger spills had the potential to significantly impact subsoils and the underlying aquifer.

Wastewater generation at the Wind Farm Site and Grid Connection Site also presented a potential risk to downgradient groundwater wells, groundwater quality, and surface water.

Mitigation measures implemented during construction are detailed in Chapter 8 (Land, Soils and Geology), Chapter 9 (Hydrology and Hydrogeology), and the Construction Environmental Management Plan (CEMP) (Appendix 4-4). These measures included best practice procedures for the handling, storage, and use of hydrocarbons and wastewater management.

Overall, the application of these best practice measures minimised the risk of contamination by reducing the likelihood of spills and effectively breaking the pathways between potential sources and environmental receptors.

The 2019 CEMP (Appendix 4-4) included a Waste Management Plan which outlines the best practice procedures which were adhered to during the construction phase of the Existing Development. The WMP outlines the methods of waste prevention and minimisation by recycling, recovery, and reuse during the construction phase of the Existing Development. Disposal of waste was seen as a last resort. The removal of hazardous materials was carried out by a licenced operator for disposal at a licensed waste facility. Refer to the 2019 CEMP (Appendix 4-4) for best practice measures which were employed on-site to prevent the creation of waste.

16.3.2.3 Technological

Building Fire/Industrial Fire/Explosion

The likelihood of fire occurring at the during the construction phase of the Existing Development arising from sources such as electrical faults or fuel mismanagement, was considered low due to the implementation of good site management practices, staff training, and appropriate site design and layout.

All site staff complied with the Health & Safety Authority's '*Guidelines on the Procurement, Design and Management Requirements of the Safety, Health and Welfare at Work (Construction) Regulations 2013*', including adherence to the site-specific Health and Safety Plan and the use of appropriate Personal Protective Equipment. An Emergency Response Plan (ERP) was prepared prior to the construction phase and implemented and adhered to on-site. The ERP provides details of procedures which would have been adopted in the event of an emergency in terms of site health and safety and

environmental protection. Refer to Chapter 4: Description of the Existing Development and Appendix 4-4: 2019 CEMP of this EIAR for details.

The possibility of fires was low during the construction phase of the Existing Development due to the sparse distribution of constructed buildings within the Wind Farm Site within a predominantly wetlands area and set back from the commercial forestry.

Hazmat Release

As outlined in Section 16.3.1, the implementation of best practice and mitigation measures detailed in the 2019 CEMP (Appendix 4-4) effectively broke the 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 Wind Farm Site and Grid Connection Site.

16.3.2.4 Transportation

The Existing Development utilised the existing road network onsite, upgrading these existing roads where required. Construction related traffic originated from the delivery of materials to the Wind Farm Site and Grid Connection Site and transport of employees to from and throughout the Wind Farm Site and Grid Connection Site. The localised traffic disruptions as a result of other works were mitigated through the use of industry standard traffic management measures. Further detail on traffic management and mitigation can be found in Chapter 15: Material Assets of this EIAR.

16.3.2.5 Health and Safety

Construction sites and associated machinery pose a potential health and safety hazard to construction workers if site rules are not properly implemented. Vehicles entering and exiting construction sites can also posed a potential risk to members of the public. During the construction of the Existing Development, there were no construction related incidents/near misses, injuries to workers or incidents with the potential to cause injury. Likewise, there were no traffic/machinery related incidents or near misses to construction staff or members of the public through vehicular access and egress to/from the Wind Farm Site.

All staff were made aware of and adhered 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 encompassed the use of all necessary Personal Protective Equipment and adherence to the site Health and Safety Plan. An Emergency Response Plan (ERP) which was prepared prior to the construction phase was implemented and adhered to on-site. The ERP provided details of procedures to be adopted in the event of an emergency in terms of site health and safety and environmental protection. The ERP is included within the 2019 CEMP (Appendix 4-4 of this rEIAR).

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 Existing

Development are discussed above in sections 16.3.1 and 16.6.3.2 Some risks are not applicable for the Existing 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 16.6.2.1
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 16.6.2.1
Aircraft Incident F Major	N/A
Ground Aircraft Incident	N/A
Rail Incident	N/A
Major RTC	Discussed in Section 16.3.2.4
RTC Hazmat	Discussed in Section 16.3.1 and 16.3.2.3
Marine Incident	N/A
Civil Disturbance	N/A
Major Crowd Safety /Large Building Fire	N/A
Terrorism	N/A
Mass Public Violence	N/A
Pandemic	N/A

16.3.4 Baseline Conditions Summary

There were no severe or extreme climate events during the construction of the Existing Development. There were no seismic activity, flooding, or wildfires at the Wind Farm Site and Grid Connection Site during or since the construction of the Existing Development or due to the construction of the Existing Development e.g. building fires or site mismanagement. There were no reported hazardous leaks, spills, or contamination events during the construction of the Existing Development or since, at the Wind Farm Site and Grid Connection Site. There were no traffic or transport related incidents onsite or along the N15, associated with the construction of the Existing Development or construction related activities. During construction of the Existing Development, all staff were made aware of and adhered 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 encompassed the use of all necessary Personal Protective Equipment and adherence to the site Health and Safety Plan. An ERP which was prepared prior to the construction phase was implemented and adhered to on-site. The ERP provided details of procedures to be adopted in the event of an emergency in terms of site health and safety and environmental protection. The ERP is included within the 2019 CEMP (Appendix 4-4 of this rEIAR).

16.4 Risk Assessment

This section outlines the possible risks that the Existing Development was associated with during the construction phase. 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 that could have occurred during the construction of the Existing Development assumes that all mitigation measures and safety procedures have failed to prevent the major accident and/or disaster i.e. no mitigation.

16.4.1 Assessment of Significant Effects

16.4.1.1 'Do-Nothing' Scenario

The 'Do Nothing' Scenario is an alternative scenario to retaining and regularising the Existing Development. In this scenario, should the Existing Development not secure substitute consent it will remain in-situ as an unauthorised and partially completed wind farm, which is, in effect, the "Do Nothing" option as far as it represents the current situation as at the date of the application for Substitute Consent. The risk profile in relation to major accidents and natural disasters would remain broadly consistent with current conditions as described in the sections below.

16.4.1.2 Assessment of Effects During Construction

Following a review of the baseline conditions and keys risks identified in the DCC Major Emergency Plan 2023 and the HSE West and Northwest Interim Regional Major Emergency Plan 2026, a risk register has been developed which contains the relevant risks that had potential to cause accidents during the construction of the Existing Development. As the construction phase of the Existing Development is complete, no potential of future risks in this phase are identified and any risks that may have occurred are known. Seven risks specific to the construction of the Existing Development were identified and are presented in Table 16-7.

Table 16-7 Risk Register Construction Phase

Risk ID	Potential Risk	Possible Cause
Natural		
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.
Potential to cause accidents and / or natural disasters.		
D	**Peat Stability** Movement of peat within the Wind Farm Site during construction.	Mismanagement of excavated material on-site. Severe weather conditions- storm, flooding.
E	**Traffic Incident** Collisions on-site and off-site with vehicles involved in construction of the Existing Development.	Driver negligence or failure of vehicular operations on Wind Farm Site roads. Traffic Management not implemented.
F	**Contamination** 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.	Accidental fuel spillage during delivery to site. Failure of fuel storage tank or tanks in plant and machinery and vehicles leading to uncontrolled emissions. Drainage and seepage water resulting from accident during infrastructure excavation; Stockpiled excavated material becoming unstable and providing a point source of exposed sediment; Excavation works during the construction of the Existing Development which could have resulted 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

Risk ID	Potential Risk	Possible Cause
		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.

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 that were associated with the Existing Development during the construction phase. The consequence rating assigned to each potential risk assumes that all mitigation measures and safety procedures would have failed to prevent the major accident and/or disaster.

16.4.1.3 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 phase of the Existing Development. 8 no. risks specific to the construction phase of the Existing Development have been identified and are presented in Appendix 16-1.

The risk assessment for each of the potential risks that could have occurred are consolidated in Table 16-8 which provides their 'risk-score'. A corresponding risk matrix is provided in Table 16-9, which is colour coded to provide an indication of the critical nature of each risk. As outlined in Table 16-8, the red zone represents 'high risk' scenarios, the amber zone represents 'medium risk' scenarios, and the green zone represents 'low risk' scenarios.

Table 16-8 Risk Scores

Risk ID	Potential Risk	Likelihood Rating	Consequence Rating	Risk Score	Did Hazard Arise? (Yes/No)
Construction Phase of the Existing Development					
A	Critical Infrastructure Emergencies	1	1	1	No
B	Severe Weather	2	1	2	No
C	Flooding	1	1	1	No
D*	Peat Stability	Not Applicable	3	Not Applicable	Yes
E	Traffic Incident	3	2	6	No
F	Contamination	2	2	4	No
G	Fire / Explosion	2	2	4	No
H	Collapse/ damage to structures	1	1	1	No

A Risk Score is not applicable in the table as the hazard occurred during the construction stage of the Existing Development

Table 16-9 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		E			
	2. Very Unlikely	B	F, G			
	1. Extremely Unlikely	A, C, H				

Table 16-9 presents the risks identified during the construction of the Existing Development all of which can be classified as 'low' risk scenarios, pre-mitigation according to the classification terms set out in 16.2.2.4 On this basis none of the assessed risks would have had the potential to have a significant effect on the environment including population and human health. Therefore, the overall effect is **Not Significant.** Peat Stability (D) is the only scenario identified which did occur during the construction phase of the Existing Development and therefore is discussed further below.

16.4.1.4 Peat Stability

A peat stability assessment was undertaken in 2017 to inform the design, EIAR and planning application for the Permitted Development. Refer to Appendix 16-2 of this rEIAR for details. The results of the shear vane testing undertaken as part of the peat stability assessment showed an average peat strength of 15 kilopascals (kPa), and therefore the site investigations and assessment concluded that the Wind Farm Site had an acceptable margin of safety pertaining to landslide risk. The 2017 assessment at each infrastructure location of the Permitted Development included a number of mitigation/control measures to ensure the continued stability of the Wind Farm Site. The risk of peat instability was further minimised through the implementation of the best practice construction control measures outlined in the 2019 CEMP (Appendix 4-4) such as:

- *'Appointment of experienced and competent contractors;*
- *The site should be supervised by experienced and qualified personnel;*
- *Allocate sufficient time for the project (be aware that decreasing the construction time has the potential to increase the risk of initiating a peat movement);*
- *Prevent undercutting of slopes and unsupported excavations;*
- *Maintain a managed robust drainage system;*
- *Prevent placement of loads/overburden on marginal ground;*
- *Set up, maintain and report readings from peat stability monitoring systems;*
- *Ensure construction method statements are followed or where agreed modified/ developed; and,*
- *Revise and amend the Geotechnical Risk Register as construction progresses.'*

Following the peat slide in November 2020, a peat stability assessment was undertaken by Fehily Timoney in 2021 (Peat Stability Assessment of Meenbog Wind Farm Site, Appendix 8-2) in compliance with EPA's Direction, dated 3rd of December 2020, under Regulation 8(1)(b) of the European Communities (Environmental Liability) Regulations 2008. In addition to the report, meetings with the EPA on the matter and parameters for assessment were discussed. The assessment included but was not limited to the following:

- Review of construction works at the site,
- Review of ground conditions
- Detailed site inspection,
- Identification of previous peat failures and instability at the site,
- Qualitative assessment of peat stability at the site.
- Findings and mitigation measures.

The 2021 Fehily Timoney report (Appendix 8-2) concluded that the peat slide occurred due to a number of contributary causes, namely, a period of intense rainfall after a relative dry period, the existing forestry drainage pattern, recent downslope felled forestry on peat, localised topography at the failure site, and a localised area of weak peat failed under the construction of a 20m floating road. The recommendations of the report, arising from significant site investigations were incorporated into a set of updated construction controls procedures for the Site produced by MCE, (Appendix 4-7). The construction control procedures were developed based on best practice and include the mitigation measures and findings of the FT report.

Immediately following the November 2020 Peat Slide, all construction works relating to the Wind Farm Site were suspended, except for the peat slide remediation works and management activities. Environmental and engineering measures comprising containment and stabilisation work to minimise effects on lands, receiving watercourses and the surrounding habitat were implemented. To mitigate against the effect of the peat slide and to mitigate against future potential peat slides, 3 no. barrage walls were constructed along the course of the slide to stop the movement of any additional peat. Water and sediment management elements were implemented on-site also. These works were undertaken under the supervision of on-site engineers Ionic Consulting (Ionic). Further remedial and mitigation measures were developed for the construction activities post the peat slide event which included geotechnical investigations and assessments, monitoring of the Wind Farm Site, drainage improvements, and tree felling management. Rehabilitation measures of the peat slide slip scar and the Shruhangarve Stream were also implemented on-site. For further information on these remediation works, refer to Section 4.4.3 and 4.5 of Chapter 4 Description of the Existing Development.

An assessment of the Wind Farm Site with respect to peat stability was conducted by Fehily Timoney in 2026 (Appendix 8-1 2026 Peat Stability Assessment of this rEIAR). The Fehily Timoney report concludes that the as constructed works associated with the Existing Development are currently stable and that it is considered that there is no ongoing risk of peat failure on the Wind Farm Site from the Existing Development.

People

There was no injury, loss of life or near miss incident to members of the public or construction staff during or following the peat slide event. No households were evacuated and no impacts occurred to any public road, utilities, or infrastructure. As discussed above in Appendix 8-1 Peat Stability Assessment Report of this rEIAR, it is considered there is no ongoing risk of peat failure on the Wind Farm Site from the Existing Development. The likelihood of a landslide due to the Existing Development impacting 'People' is 'Low' with a Slight Significance of Effects in accordance with Table 16-4.

Environment

The impact of the peat slide on land, water, and habitats and the aquatic environment have been assessed in and Chapter 6: Biodiversity, Chapter 8: Land, Soils and Geology and Chapter 9: Hydrology and Hydrogeology of this rEIAR. Restoration works were carried out to the Shruhangarve stream are discussed in the aforementioned chapters and Chapter 4 Description of the Existing Development. As discussed above, in Appendix 8-1 Peat Stability Assessment Report it is considered there is no ongoing risk of peat failure on the Wind Farm Site from the Existing Development. The likelihood of a peat slide due to the Existing Development impacting the 'Environment' is 'Low' with a Moderate Significance of Effects in accordance with Table 16-4.

Essential Services

There are no essential services or utilities within the Wind Farm Site and therefore, there was no interruption utilities or services as a result of the peat slide. Likewise, there was no impact to the local or national road network. The likelihood of a landslide due to the Existing Development impacting 'Essential Services' is 'Low' with a Slight Significance of Effects in accordance with Table 16-4.

Social

While the November 2020 peat slide resulted in a temporary negative impact on the local community, it did not lead to serious disruption to the functioning of the community or wider society. The likelihood of a landslide due to the Existing Development impacting 'Social' is 'Low' with a Slight Significance of Effects in accordance with Table 16-4.

16.4.2 Mitigation Measures

16.4.2.1 Peat Stability During Construction (D)

Peat stability during the construction phase of the Existing Development is discussed in detail in Chapter 8: Land, Soils, and Geology of this rEIAR. The Peat Stability Risk Assessment (2017) for the Permitted Development (Appendix 16-2), assessed the risk of peat instability at the Wind Farm Site and prescribed detailed mitigation and control measures to ensure that the construction of the Wind Farm development did not impact the stability of the Wind Farm Site. The standard mitigation measures implemented during the construction works with respect to peat stability, as detailed in the report and included in the 2019 CEMP (Appendix 4-4), were as follows:

- The project geotechnical engineer carried out inspections and monitoring of all development on site;
- Experienced and competent contractors were appointed;
- The Wind Farm Site and Grid Connection Site was supervised by experienced and qualified personnel;
- Sufficient time was allocated for the project;
- Prevented undercutting of slopes and unsupported excavations;
- Maintained a managed robust drainage system;
- Prevented placement of loads/overburden on marginal ground;
- Set up, maintained and reported findings from monitoring systems (as outlined in the PSRA);
- Ensured construction method statements were developed and agreed before works commenced and all method statements were followed by the contractor; and
- Revised and amended the Construction Risk Register as construction progresses to ensure that risks are managed and controlled for the duration of construction.

Following the November 2020 Peat Slide, additional mitigation and monitoring measures were recommended as listed below. Refer to Construction Controls Procedures for the Site produced by MCE 2021, (Appendix 4-7) for full details:

- No vehicles to track onto peat.
- Signage to be erected to indicate prohibition of construction vehicles tracking off-road.
- Floating roads to be subjected to a formal load test and certification (by Ionic) prior to turbine erection cranes being permitted to access them. The load test will involve incrementally increasing vehicle loads. Floating roads have also previously been subjected to construction vehicles such as the A25D, which has a total weight of 45 tonnes. Vehicle loading information has been included in Appendix H. The turbine crane will be restricted to an axle load of 12t, lower than the axle load of the A25

vehicles. No vehicles to track onto peat. Signage to be erected to indicate prohibition of construction vehicles tracking off-road.

- Works will be advanced from solid construction (as previously planned) to avoid the need for plant to track over peat.
- There is a no works zone to be enforced in an area south ofT7 turbine works zone.

16.4.2.2 Residual Effects

The November 2020 Peat Slide did not have any residual effect on 'People', 'Essential Services', or 'Social' risk categories. The residual effect on land, habitats and water quality are described below:

Land, Soil and Geology:

- Given the findings of the Appendix 8-1 Peat Stability Assessment Report and the post-construction site inspections, along with the implementation of the control measures prescribed in the 2019 CEMP, the residual effect was a negative, moderate, direct, permanent effect on peat and land associated with the November 2020 Peat Slide. The effect is considered to be moderate as the volumes of peat which were disturbed as a result of the peat slide (86,240m^3) equate to 19% of the total volume of peat disturbed as a result of the Existing Development. In the context of the volumes of peat present at the Wind Farm Site and in the wider area, the volumes moved by the peat slide are considered to be minor. Furthermore, the effect on land is considered to be moderate (not significant) as the area of the slip scars (3.58ha) equates to only 0.4% of the total Wind Farm Site area (892ha).

Biodiversity and Aquatic Environment:

The peat slide resulted in a temporary Significant effect on water quality in the Shruhangarve and Mourne Beg Rivers. However, water quality had returned to good status (Q4) throughout the Mourne Beg after 11 months (at most) and to Q3 in the Shruhangarve. The Shruhangarve continues to improve and has likely been helped by the restoration works.

The peat slide resulted in temporary Significant siltation and smothering of aquatic habitat, but this has recovered incrementally in the intervening period and currently siltation and eutrophication in the catchment are likely to be caused by other factors in the catchment, with no evidence of significant ongoing effects resulting from the siltation from the Wind Farm Site.

No evidence that the peat slide resulted in significant effects on Atlantic salmon, European eel or otter were recorded. Salmon fry abundance and redd count increased following the peat slide but the distribution of redds was altered, with fewer downstream of the peat slide and higher numbers upstream in 2021. However, numbers increased in the subsequent years and were distributed throughout the system. Eel and otter were recorded in similar numbers and locations before and after the peat slide.

There was a temporary reduction in brown trout during surveys in 2021 and 2022, but this had recovered in the 2023, 2024 and 2025 surveys.

- Following the implementation of the remediation works and with the passage of time, no significant residual effects on any of the identified watercourses and associated aquatic habitats and species were identified.

Protected Sites and Habitats:

No adverse effects on the Croaghonagh Bog SAC or the Lough Eske and Ardnamona Wood SAC were recorded. While negative effects on the River Finn SAC and the River Foyle and Tributaries SAC were recorded following a peat slide event, such effects were temporary and did not undermine the integrity of these European Sites as defined by their conservation objectives.

No potential for significant effects on the Lough Eske and Ardnamona Wood pNHA to have occurred because of the Existing Development or to occur as a result of them in the future was identified.

- No significant ongoing or residual effects resulting from the Existing Development were recorded and no potential for it to result in any effect on European Sites into the future was identified.

No potential for significant effects on the Lough Eske and Ardnamona Wood pNHA to have occurred because of the Existing Development or to occur as a result of them in the future was identified.

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 *that following the implementation of mitigation and through the passage of time, no significant residual effects on any of the identified watercourses and associated aquatic habitats and species were identified.*

16.5 Cumulative Risk Assessment – Existing Development

This section presents an assessment of the cumulative effects associated with the construction of the Existing Development and other developments, existing and/or proposed at the time of construction to/from Major Accidents and Natural Disasters. The assessment considers relevant developments within 20 km of the Wind Farm Site and Grid Connection, including the remediation works associated with the November 2020 Peat Slide. Further information on the cumulative assessment methodology and the list of projects considered as part of the cumulative assessment are detailed in Section 2.9 of Chapter 2: Background and Appendix 2-1, respectively. Due to the remote location of the Wind Farm Site and Grid Connection Site, no other developments were identified within 500 m of the Existing Development, and no relevant developments were identified within 1 km.

The cumulative assessment was undertaken to determine whether the Existing Development, when considered cumulatively with other relevant plans and/or projects, has influenced the surrounding environment in a manner that could have given rise to significant effects relating to major accidents or natural disasters.

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.

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 Response Plan (2019 CEMP Section 6), onsite emergency and remediation works were subsequently implemented (under the supervision of site engineers Ionic Consulting), as detailed in this rEIAR. An updated Peat Stability Assessment Report undertaken by Fehily Timoney (2026) concludes that the as constructed works associated with the Meenbog Wind Farm are currently stable and that there is no ongoing risk of peat failure on the Wind Farm Site from the Existing Development. As such, the emergency measures 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.

Notwithstanding the occurrence of peat instability during construction, and the identified impacts in terms of people, the environment, essential services, and social receptors at the time of the event, it is concluded that No Significant Effects arose following the implementation of mitigation and remediation measures. Accordingly, there is no potential for significant cumulative effects associated with peat instability arising from the Existing Development when considered in combination with other relevant plans and projects.

16.6 In Cumulation Risk Assessment

This section considers the in-cumulation impact of the Existing Development and Prospective Development (the Subject Development). Table 16-11 below details the residual in-cumulation risk of the Subject Development.

Table 16-10 Assessment of potential In-Cumulation Risk of the Subject Development

Potential Risk	Existing Development	Prospective Development	Subject Development
Critical Infrastructure Emergencies	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 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 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	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. 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.	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 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.	The risk of severe weather events from 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.
Flooding	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 and Grid Connection Site is not mapped within any historic or modelled groundwater flood zones except	The risk of flooding is considered very unlikely when taking into account the assessment in Chapter 9: Water of the EIAR, the raising of infrastructure in flood zones to above flood zone level, the implementation of a bespoke drainage design plan for the Prospective Development	The risk of flooding associated with both the Existing Development and the Prospective Development are considered to be Not Significant.

Potential Risk	Existing Development	Prospective Development	Subject Development
	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	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.	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.
Traffic Incident	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 Grid Connection Site. The N15 overlaps with the Wind Farm Site Grid Connection Site; the constructed Grid Connection is located within a portion of the N15. There were no impacts to utilities e.g. watermains that are located within the N15 road during the laying pf 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 emergencies from the construction of the Existing Development is Not Significant.	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.	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, the potential for in-combination effects arising from the Subject Development is considered to be Not Significant.
Peat Stability	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	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	The risk of peat instability for both the Prospective Development and Existing

Potential Risk	Existing Development	Prospective Development	Subject Development
	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	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; Peat Stability Assessment Report Appendix 8-1 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.	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.
Contamination	Best practise measures were implemented on site for the handing/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 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.	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 of the EIAR 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 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.	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 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	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	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	The risk of fire/explosion associated with both the Prospective Development and Existing Development are considered as Not Significant.

Potential Risk	Existing Development	Prospective Development	Subject Development
	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.	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.	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	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.	As stated in Section 16.3 and Appendix 16-1 of the EIAR, 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 Report 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 the 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.	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 16-10 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 rEIAR and Chapter 2 Background and Policy of the EIAR.

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 this 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 rEIAR and Section 2.9 of Chapter 2 Background and Policy of the EIAR, 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 rEIAR and Chapter 16 of the 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 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 (Existing Development and Prospective Development). Table 16-11 below details the residual effects of the Subject Development, and the potential for which the Subject Development could affect a different jurisdiction.

Table 16-11 Assessment of potential Transboundary Effects of the Subject Development

Topic	Existing Development	Prospective Development	Subject Development
Critical Infrastructure Emergencies	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.	The potential for transboundary effects from Critical Infrastructure Emergencies are considered within the Risk Assessment for the Prospective Development and will be Not Significant. Based on this assessment it is concluded that there is no potential for Significant Transboundary Effects from the Prospective Development	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. 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 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.	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 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.	No potential for Significant Transboundary Effects from the Subject Development

Topic	Existing Development	Prospective Development	Subject Development
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 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. *Therefore, the* transboundary effects to/from flooding during the construction of the Existing Development was 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 Prospective Development during its construction, operation and decommissioning is considered Low (refer to Appendix 9-1 Flood Risk Assessment of the EIAR) 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.	No potential for Significant Transboundary Effects from the Subject Development
Peat Stability	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 *that following the implementation of mitigation and through the passage of time, no significant residual effects on any of the identified watercourses and associated aquatic habitats and species were identified.* *The Peat Stability Report 2026 concludes that the likelihood of a landslide from the Existing Development is low.* *Therefore, the* transboundary effects from Peat instability at the Site were Not Significant.	The findings of the Appendix 8-1 Peat Stability Assessment Report 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 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.	No potential for Significant Transboundary Effects from the Subject Development
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 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	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	No potential for Significant Transboundary Effects from the Subject Development

Topic	Existing Development	Prospective Development	Subject Development
	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.	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 the border to the Site is Not Significant.	
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 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 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.	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, 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 of the EIAR). 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.	No potential for Significant Transboundary Effects from the Subject Development
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 were implemented onsite, and an Emergency Management Plan was in place to	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	No potential for Significant Transboundary Effects from the Subject Development

Topic	Existing Development	Prospective Development	Subject Development
	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	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.	
Collapse / damage to structures	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	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 proposed onsite activities and set back distance from any 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	No potential for Significant Transboundary Effects from the Subject Development

The assessment in Table 16-11 concludes that the Existing Development individually, the Prospective Development individually, and the Subject Development collectively do not result in any significant effects in relation to severe weather, flooding, peat stability/landslide, traffic incidents, or contamination. Accordingly, there is no potential for significant transboundary effects on neighbouring jurisdictions