



APPENDIX 16-1

RISK ASSESSMENT

Risk ID	Potential Risk	Possible Cause	Environmental Effect	Likelihood Rating	Basis of Likelihood	Consequence Rating	Basis of Consequence	Risk Score (Consequence x Likelihood)	Did Hazard Arise? (Yes/No)
Construction Phase of the Existing Development									
A	Critical Infrastructure Emergencies	Traffic accidents during turbine or substation component delivery, or extreme weather- periods of heavy rainfall, taking into account climate change and strong winds	Illness or loss of life;	1	The risk of traffic accident during every 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)	1	The risk of a traffic accident due to severe weather conditions during the construction phase would have resulted in a 'very low disruption to the delivery of services essential for the maintenance of vital societal functions or economic activities' should a severe weather event have occurred, with 'minor injuries only'	1	No
B	Severe Weather	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds	Illness or loss of life; Damage to, or depletion of aquatic habitats and species.	2	The risk of severe weather was unlikely when considering the assessment in Chapter 11: Climate and weather conditions recorded over the last 30 years within the area. Construction works took into account weather forecasts and predicted rainfall in particular, and construction was paused if it was required (Appendix 4-3 CEMP)	1	The risk of severe weather conditions during the construction phase would have resulted in a very low consequence in that a 'Very low disruption to the delivery of services essential for the maintenance of vital societal functions or economic activities' should a severe weather event have occurred, with 'minor injuries only' If severe weather occurred, this would have caused increased mobilisation of sediment or 'simple localised contamination' which would have been controlled via the Existing Development design and mitigation measures. Drainage management systems were in place and functioning at the Existing Development. There has been no flooding at the Site during the construction phase. Further information on the Existing Development drainage design can be found in Chapter 4: Description of the Existing Development.	2	No
C	Flooding	Extreme weather- periods of heavy rainfall, taking into account climate change and strong winds	Illness or loss of life; Groundwater Flooding; Flooding to surrounding properties; Damage to, or depletion of aquatic habitats and species.	1	The risk of flooding was considered very unlikely when taking into account the assessment in Chapter 9: Hydrology and Hydrology of the rEiAR. There was no direct discharge (without treatment for sediment reduction, and attenuation for flow management) of runoff from the wind farm drainage system into the pre-existing site drainage network. This reduced the potential for any increased risk of downstream flooding. The Wind Farm Site is not mapped within any historic or modelled groundwater flood zones. There have been no flooding events recorded at the Site during the construction of the Existing Development. Further information on the Existing Development drainage design can be found in Chapter 4: Description of the Existing Development.	1	The risk of flooding during the construction phase would have been assessed as having very low consequences in that there would have been a 'limited disruption to community' had flooding occurred, with 'minor injuries only'. Flooding had the potential to cause increased sediment mobilisation or 'simple localised contamination' however mitigation measures and best practice guidance as outlined in Appendix 4-3, were adhered to during the construction phase of the Existing Development. Had a flooding occurred, it would have been localised. Drainage management systems were in place and functioning at the Existing Development.	1	No
D*	Peat Stability	Works requiring excavation or placement of peat. Severe weather conditions - storm flooding	Movement of peat; Sedimentation of nearby watercourse; and Damage to, or depletion of aquatic habitats and species.	Not Applicable	The risk of peat instability was considered unlikely. The Existing Development was designed to minimise the potential for peat instability and failure. Although previous occurrences of peat instability have been recorded on-site, the results of the pre-construction investigations carried out prior to construction of the Existing Development showed that the Site had an acceptable margin of safety and was suitable for the wind farm development.	3	The November 2020 peat slide and incidents of peat failures and instability occurred during the construction phase of the Existing Development. Due to the sensitivity of the aquatic habitats surrounding the Site, there was 'heavy contamination localised effects of extended duration' (e.g. watercourses, aquatic habitats and associated species). The records of peat instability during the construction phase resulted in a serious consequence in that there was 'Medium disruption to the delivery of services essential for the maintenance of vital societal functions or economic activities'	Not Applicable	Yes

E	Traffic Incident	Driver negligence or failure of vehicular operations on Wind Farm Site roads. Traffic Management not implemented	Injury or loss of life.		Chapter 15: Material Assets details traffic movements which relate to the construction phase of the Existing Development. A detailed Traffic Management Plan was prepared and incorporated in the 2019 updated CEMP which was prepared in accordance with the planning permission conditions for the Permitted Development. The CEMP relates to the Meenbog Wind Farm, junction accommodation works and the works along the grid route and the Existing Development was constructed with this CEMP in place. The internal road network within the Wind Farm Site had been designed to allow for 2 vehicles to pass on the road, and/or in passing bays, which reduced the likelihood of a traffic incident or collision occurring within the Wind Farm Site. There was also a speed limit imposed on the internal Wind Farm Site road network, which also reduced the likelihood of any traffic incident or collision. Staff were given toolbox talks highlighting construction entrances and proper access and egress procedures. It can be determined that there was some 'opportunity, reason or means' for a vehicle collision to have occurred on site or on public roads, 'at some time.' An unlikely risk was therefore assigned. Although, no traffic incidents were reported as a result of the Existing Development.		The risk of a traffic incident during the construction phase would have been assessed as having very low consequences having regard to on-site speed limits and vehicular movements. There was a potential risk of 'serious injuries greater than 1 in 100,000' had a vehicular collision occurred, with 'low disruption to the delivery of services essential for the maintenance of vital societal functions or economic activities.'	6	No
F	Contamination	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 may have resulted in entrainment of sediment from the excavations during construction.	Release of suspended solids to groundwater. Contamination of local drinking water supplies and groundwater aquifers. Groundwater and surface water emissions from construction activities. Accidental spillage during refuelling.		As outlined in Chapter 4: Description of the Existing Development, fuel storage and re-fuelling plant and machinery was managed on-site to ensure containment and prevent spillages of fuel. No fuels, chemicals or solvents was stored outside of the confines of the Wind Farm Site. Setback distances from sensitive hydrological features meant that adequate room was maintained for the drainage mitigation measures as detailed in Chapter 9: Hydrology and Hydrogeology. Standard and specific mitigation to prevent accidents and indirect effects of accidents were included in the Existing Development design and were adhered to.		The risk of a fuel spillage or impact on surrounding drainage during the construction stage would have resulted in a low consequence in that there have been 'critical injuries/illness greater than 1 in 250,000' with 'effects of short duration'. The effects on the environment would have been 'Simple, regional contamination', (e.g., watercourses).	4	No
G	Fire / Explosion	Equipment or infrastructure failure; Fuel spillage/storage; Electrical problems; and Employee negligence.	Illness or loss of life; Damage to, or depletion of habitats and species; Impacts on ambient air quality; Fire and explosion.		As outlined in Chapter 4: Description of the Existing Development, fuel stored onsite during the construction phase of the Existing Development was stored in bunded areas. Therefore, fuel leakage/spillage was not considered to be a significant fire risk.		Had a fire/explosion occurred at the Site, the result would have had a Low Impact, with 'Simple, regional contamination, effects of short duration'. Due to the lack of infrastructure, and correct fuel storage during construction, the likelihood of such an incident occurring was reduced. There would have been 'community functioning with considerable inconvenience' in the area for a 'short duration'. The 'command, control & co-ordination systems' as well as the 'common elements of response' detailed in the Donegal County Council Major Emergency Plan would have worked to reduce the consequence (both on people and the environment) of fire/explosions at the Site.	4	No

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.	Injury or loss of life.	1	According to the Irish National Seismic Network (INSN), earthquakes measuring ~2 on the Richter Scale are “normal” in terms of seismicity in Ireland. These are known as microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. As such, buildings in Ireland are extremely unlikely to be damaged or collapse due to seismic activity. As outlined in Chapter 8: Land, Soils and Geology, and Appendix 8-1 Peat Stability Risk Assessment as part of the 2017 EIAR, there was a low risk of landslides at the Site, therefore a low risk of collapse or damage to structures on the Site. The November 2020 peatslide did not cause any damage to, or collapse of, structures. As outlined in Chapter 11: Climate of this rEIAR, due to Ireland’s latitudinal position, the probability of extreme weather events posing a threat to human life were low. However, had such a weather event occurred at the Site during the construction phase, the Severe Weather Plan as set out in Section 11 of the Donegal County Major Emergency Plan would have been followed. Having regard to speed limits within the Site, any collision of vehicles with any infrastructure could have resulted in damage/collapse. However, the Traffic Management Plan was implemented and adhered to on-site. No such incidents of collapse/damage to structures was reported during the construction phase of the Existing Development.	1	The risk of infrastructure collapse during the construction phase would have resulted in a very low consequence in that there would have been ‘minor injuries only’ and no real impact on any environmental receptors. Had a severe weather event occurred, all stipulations outlined in the Severe Weather Plan as detailed in the Donegal County Council Major Emergency Plan would have been followed explicitly.	1	No
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*A Risk Score is not applicable in the table as the hazard occurred during the construction stage of the Existing Development