



1.	NON-TECHNICAL SUMMARY .....	1
1.1	Introduction .....	1
1.2	Background to the Proposed Development .....	4
1.3	Consideration of Reasonable Alternatives.....	8
1.4	Description of the Proposed Development .....	10
1.5	Population and Human Health .....	13
1.6	Terrestrial Ecology .....	15
1.7	Aquatic Ecology .....	18
1.8	Lands, Soils and Geology .....	20
1.9	Hydrology and Hydrogeology .....	21
1.10	Air Quality .....	22
1.11	Climate .....	23
1.12	Noise and Vibration.....	25
1.13	Archaeology and Cultural Heritage .....	26
1.14	Material Assets.....	26
1.15	Vulnerability of the Project to Major Accidents and Natural Disasters.....	29
1.16	Interactions of the Foregoing.....	30
1.	INTRODUCTION .....	1-1
1.1	Introduction .....	1-1
1.1.1	Context of the Proposed Development .....	1-1
1.1.2	Planning History .....	1-2
1.1.2.1	Existing Kilgarvan Wind Farm Turbines.....	1-2
1.1.3	References to the Proposed Development .....	1-1
1.1.4	Proposed Development Site Location .....	1-1
1.2	Legislative Context of Environmental Impact Assessment.....	1-1
1.2.1	EIAR Guidance .....	1-2
1.2.2	Wind Energy Development Guidelines for Planning Authorities.....	1-2
1.3	The Applicant.....	1-2
1.4	Brief Description of the Proposed Development .....	1-3
1.5	Need for the Proposed Development .....	1-5
1.5.1	Overview.....	1-5
1.5.1.1	Climate Change and Greenhouse Gas Emissions.....	1-6
1.5.2	Energy Security .....	1-7
1.5.2.1	REPowerEU .....	1-9
1.5.3	Competitiveness of Wind Energy.....	1-9
1.5.3.1	EU 2020 Renewable Energy Targets .....	1-10
1.5.3.2	EU 2030 Renewable Energy Targets .....	1-10
1.5.4	Increasing Energy Consumption .....	1-11
1.5.5	Reduction of Carbon Emissions and Other Greenhouse Gases.....	1-14
1.5.6	Economic Benefits.....	1-16
1.6	Purpose and Scope of the EIAR .....	1-17
1.7	Structure and Content of the EIAR .....	1-18
1.7.1	General Structure .....	1-18
1.7.2	Description of Likely Significant Effects and Impacts.....	1-18
1.8	Project Team .....	1-22
1.8.1	Project Team Responsibilities .....	1-22
1.8.2	Project Team Members .....	1-24
1.8.2.1	MKO .....	1-24
1.8.2.2	Gavin and Doherty GeoSolutions.....	1-29
1.8.2.3	Ecology Ireland .....	1-30
1.8.2.4	Aquatic Ecology Unit, UCC.....	1-32
1.8.2.5	Hydro Environmental Services Ltd.....	1-32
1.8.2.6	TNEI Ireland Ltd. ....	1-32
1.8.2.7	Tobar Archaeological Services.....	1-33
1.8.2.8	Alan Lipscombe Traffic and Transport Consultants .....	1-34

1.8.2.9	Ai Bridges .....	1-34
1.9	Difficulties Encountered.....	1-34
1.10	Viewing and Purchasing of the EIAR.....	1-34
<b>2.</b>	<b>BACKGROUND TO THE PROPOSED DEVELOPMENT .....</b>	<b>2-1</b>
2.1	Introduction .....	2-1
2.1.1	Renewable Energy Resources .....	2-2
2.2	Climate Change Policy and Targets .....	2-2
2.2.1	International Policy .....	2-3
2.2.2	National Climate Policy .....	2-5
2.2.3	Climate Target Progress .....	2-10
2.3	Renewable Energy Policy and Targets .....	2-10
2.3.1	International Renewable Energy Policy .....	2-11
2.3.2	National Policy on Renewable Energy .....	2-13
2.3.3	Renewable Energy Target Progress.....	2-14
2.4	Strategic Planning Policy Context .....	2-18
2.4.1	Introduction .....	2-18
2.4.2	National Policy Context.....	2-19
2.4.3	Regional Policy Context.....	2-21
2.4.4	Local Policy Context .....	2-21
2.4.5	Other Relevant Material Considerations.....	2-23
2.5	Planning History .....	2-27
2.5.1	Planning Applications within the Application Boundary .....	2-27
2.5.2	Wind Energy Applications Within 25km Application Boundary.....	2-31
2.6	Scoping and Consultations .....	2-47
2.6.1	Scoping .....	2-47
2.6.2	Scoping Responses.....	2-47
2.6.3	Other Consultations .....	2-49
2.6.4	Pre-Planning Meetings .....	2-50
2.7	Cumulative Impact Assessment .....	2-52
2.7.1	Methodology for the Cumulative Assessment of Projects.....	2-53
2.7.2	Cumulative Study Area .....	2-53
2.8	Conclusion .....	2-57
<b>3.</b>	<b>CONSIDERATION OF REASONABLE ALTERNATIVES .....</b>	<b>3-1</b>
3.1	Introduction .....	3-1
3.2	Consideration of Reasonable Alternatives.....	3-2
3.2.1	Methodology .....	3-2
3.2.2	'Do-Nothing' Alternative .....	3-2
3.2.3	Alternative Site Location .....	3-6
3.2.3.1	Previous Site History.....	3-6
3.2.3.2	Strategic Site Selection.....	3-6
3.2.4	Alternative Renewable Energy Technologies.....	3-12
3.2.5	Alternative Turbine Numbers and Model .....	3-12
3.2.6	Alternative Turbine Layout and Development Design.....	3-16
3.2.6.1	Constraints and Facilitators Mapping.....	3-16
3.2.6.2	Turbine Layout.....	3-17
3.2.7	Alternative Design of Ancillary Structures .....	3-25
3.2.7.1	Road Layout.....	3-25
3.2.7.2	Turbine Hardstands.....	3-25
3.2.7.3	Construction Compounds .....	3-25
3.2.7.4	Borrow Pit.....	3-26
3.2.7.5	Met Mast.....	3-26
3.2.7.6	Substation .....	3-26
3.2.8	Alternative Grid Connection Cabling Route Options .....	3-26
3.2.9	Alternative Transport Route and Site Access .....	3-26

3.2.9.1	Port of Entry .....	3-27
3.2.9.2	Delivery to Site.....	3-27
3.2.10	Alternative Mitigation Measures .....	3-27
3.3	Conclusion .....	3-28
<b>4.</b>	<b>DESCRIPTION OF THE PROPOSED DEVELOPMENT.....</b>	<b>4-1</b>
4.1	Introduction .....	4-1
4.2	Proposed Development Site Layout .....	4-2
4.3	Development Components.....	4-4
4.3.1	Existing Kilgarvan Wind Farm .....	4-4
4.3.2	Proposed Wind Turbines .....	4-7
4.3.3	Site Roads.....	4-14
4.3.4	Borrow Pit.....	4-18
4.3.5	Peat and Spoil Management Plan.....	4-21
4.3.6	Existing 110kV Electricity Substation .....	4-23
4.3.7	Site Cabling.....	4-23
4.3.8	Temporary Construction Compounds .....	4-27
4.3.9	Meteorological Mast .....	4-27
4.3.10	Watercourse Crossings .....	4-27
4.3.11	Tree Felling and Replanting .....	4-29
4.3.12	Site Activities .....	4-33
4.4	Access and Transportation .....	4-36
4.4.1	Site Entrance .....	4-36
4.4.2	Turbine and Construction Materials Delivery Route.....	4-36
4.4.3	Traffic Management .....	4-37
4.5	Community Gain Proposal.....	4-38
4.5.1	Renewable Energy Support Scheme .....	4-39
4.5.2	Community Benefit Fund for the Proposed Development .....	4-39
4.6	Site Drainage .....	4-40
4.6.1	Introduction.....	4-40
4.6.2	Existing Drainage Features.....	4-40
4.6.3	Drainage Design Principles .....	4-40
4.6.4	Best Practice Guidance.....	4-41
4.6.5	Drainage Design.....	4-42
4.6.6	Drainage Management and Maintenance.....	4-50
4.7	Construction Phasing and Timing.....	4-50
4.7.1	Construction Sequencing.....	4-50
4.7.2	Construction Phase Monitoring and Oversight .....	4-53
4.8	Construction Methodologies .....	4-53
4.8.1	Removal of Existing Turbines.....	4-53
4.8.2	Keyhole Forestry Felling.....	4-54
4.8.3	Turbine Foundations .....	4-55
4.8.4	Site Roads and Crane Pad Areas.....	4-56
4.8.5	Onsite Electricity Substation and Control Building.....	4-56
4.8.6	Temporary Construction Compounds .....	4-57
4.8.7	Site Cable Trenching.....	4-57
4.9	Operation.....	4-58
4.10	Decommissioning.....	4-58
<b>5.</b>	<b>POPULATION AND HUMAN HEALTH.....</b>	<b>5-1</b>
5.1	Introduction .....	5-1
5.1.1	Statement of Authority .....	5-1
5.2	Population.....	5-1
5.2.1	Receiving Environment.....	5-1
5.2.2	Population Trends.....	5-2
5.2.3	Population Density.....	5-5

5.2.4	Household Statistics .....	5-5
5.2.5	Age Structure .....	5-6
5.2.6	Employment and Economic Activity.....	5-7
5.2.6.1	Economic Status of the Study Area .....	5-7
5.2.6.2	Employment by Socio-Economic Group .....	5-8
5.2.6.3	Employment and Investment Potential in the Irish Wind Energy Industry.....	5-9
5.2.7	Land-Use.....	5-11
5.2.8	Services .....	5-11
5.2.8.1	Education .....	5-11
5.2.8.2	Access and Public Transport .....	5-11
5.2.8.3	Amenities and Community Facilities .....	5-12
5.3	Tourism.....	5-12
5.3.1	Overseas Tourism Numbers and Revenue .....	5-12
5.3.2	Domestic Tourism and Revenue .....	5-13
5.3.3	Tourist Attractions .....	5-13
5.4	Public Perception of Wind Energy.....	5-14
5.4.1	Sustainable Energy Ireland Survey 2003.....	5-14
5.4.1.1	Background .....	5-14
5.4.1.2	2003 Findings .....	5-14
5.4.1.3	Survey Update 2017.....	5-15
5.4.1.4	Conclusions .....	5-15
5.4.2	Public Perceptions of Wind Power in Scotland and Ireland Survey 2005.....	5-16
5.4.2.1	Background .....	5-16
5.4.2.2	Study Area .....	5-16
5.4.2.3	Findings .....	5-16
5.4.2.4	Conclusions .....	5-17
5.4.3	IWEA Interactions Opinion Poll on Wind Energy.....	5-17
5.4.4	WEI Interactions Opinion Poll on Wind Energy.....	5-17
5.5	Health Impacts of Wind Farms .....	5-18
5.5.1	Introduction.....	5-18
5.5.2	Health Impact Studies .....	5-18
5.5.3	Turbine Safety.....	5-23
5.5.4	Electromagnetic Interference .....	5-23
5.5.5	Assessment of Effects on Human Health .....	5-24
5.5.6	Vulnerability of the Project to Natural Disasters and Major Accidents .....	5-25
5.6	Property Values .....	5-25
5.7	Shadow Flicker .....	5-28
5.7.1	Background .....	5-28
5.7.2	Guidance .....	5-30
5.7.3	Shadow Flicker Prediction Methodology .....	5-30
5.7.4	Shadow Flicker Assessment Criteria.....	5-31
5.7.4.1	Turbine Dimensions .....	5-31
5.7.4.2	Study Area .....	5-31
5.7.4.3	Assumptions and Limitations.....	5-34
5.7.5	Shadow Flicker Assessment Results .....	5-35
5.7.5.1	Daily and Annual Shadow Flicker .....	5-35
5.7.5.2	Comparative Shadow Flicker Assessment .....	40
5.7.5.3	Cumulative Shadow Flicker .....	40
5.8	Residential Amenity.....	5-54
5.9	Likely Significant Impacts and Associated Mitigation Measures .....	5-55
5.9.1	'Do-Nothing' Scenario .....	5-55
5.9.2	Construction Phase .....	5-55
5.9.2.1	Health and Safety.....	5-55
5.9.2.2	Employment and Investment.....	5-56
5.9.2.3	Population .....	5-57
5.9.2.4	Land-use .....	5-57

5.9.2.5	Tourism and Amenity .....	5-57
5.9.2.6	Noise and Vibration .....	5-57
5.9.2.7	Dust .....	5-59
5.9.2.8	Traffic .....	5-59
5.9.2.9	Shadow Flicker.....	5-60
5.9.3	Operational Phase.....	5-60
5.9.3.1	Health and Safety.....	5-60
5.9.3.2	Employment and Investment.....	5-62
5.9.3.3	Tourism .....	5-62
5.9.3.4	Shadow Flicker.....	5-62
5.9.3.5	Interference with Communication Systems.....	5-63
5.9.3.6	Residential Amenity .....	5-63
5.9.4	Decommissioning Phase .....	5-64
5.9.5	Cumulative and In Combination Effects.....	5-64
5.9.5.1	Health and Safety.....	5-64
5.9.5.2	Property Values .....	5-65
5.9.5.3	Services.....	5-65
5.9.5.4	Shadow Flicker.....	5-65
5.9.5.5	Residential Amenity .....	5-65
5.10	Summary.....	5-66

**6. TERRESTRIAL BIODIVERSITY .....** 6-1

6.1	Introduction .....	6-1
6.2	Statement of Authority.....	6-1
6.3	Methodology.....	6-3
6.3.1	Relevant Guidelines.....	6-3
6.3.2	Designated Sites .....	6-3
6.3.3	Habitat & Botanical.....	6-3
6.3.4	Non-Volant Mammals .....	6-4
6.3.5	Bats.....	6-6
6.3.5.1	Passive Detector Surveys .....	6-6
6.3.5.2	Active Bat Surveys .....	6-10
6.3.5.3	Fatality Monitoring - Bats .....	6-10
6.3.5.4	Desktop Study.....	6-11
6.3.6	Birds.....	6-11
6.3.6.1	Vantage Point & Hinterland Surveys.....	6-11
6.3.6.2	Breeding & Winter Season Transects .....	6-15
6.3.6.3	Fatality Monitoring – Birds.....	6-17
6.3.7	Other Protected Fauna .....	6-17
6.3.8	Aquatic Ecology.....	6-17
6.4	Results.....	6-17
6.4.1	Designated Nature Conservation Sites .....	6-17
6.4.2	Habitat & Botanical.....	6-26
6.4.2.1	Wet heath (HH3) .....	6-26
6.4.2.2	Blanket bog (PB2/PB3) .....	6-27
6.4.2.3	Dry heath (HH1).....	6-27
6.4.2.4	Exposed siliceous rock (ER1) .....	6-28
6.4.2.5	Poor fen and flush (PF2).....	6-28
6.4.2.6	Wet grassland (GS4) .....	6-28
6.4.2.7	Acid oligotrophic lakes (FL2).....	6-29
6.4.2.8	Eroding/upland rivers (FW1) .....	6-29
6.4.2.9	Scrub (WS1) .....	6-29
6.4.2.10	Coniferous plantation (WD4).....	6-29
6.4.2.11	Gravel tracks (BL3).....	6-29
6.4.2.12	Rare Vascular Plants.....	6-31
6.4.2.13	Habitat/vegetation assessment.....	6-31

6.4.3	Non-volant Mammals .....	6-33
6.4.3.1	Desktop Review .....	6-33
6.4.3.2	Non-Volant Mammal Surveys.....	6-35
6.4.4	Bats.....	6-38
6.4.4.1	Desktop study.....	6-38
6.4.4.2	Active surveys .....	6-42
6.4.4.3	Passive Detector Survey (2018-2019) .....	6-44
6.4.4.4	Passive Bat Detector Deployment (2021-2022).....	6-45
6.4.4.5	Fatality Monitoring .....	6-50
6.4.5	Birds .....	6-53
6.4.5.1	Desktop study.....	6-53
6.4.5.2	Transects & Point Counts.....	6-53
6.4.5.3	Breeding Red Grouse Survey .....	6-55
6.4.5.4	Vantage Point & Hinterland Surveys.....	6-55
6.4.6	Other taxa .....	6-69
6.4.6.1	Desktop study.....	6-69
6.4.6.2	Field surveys.....	6-69
6.4.7	Constraints & Limitations .....	6-71
6.5	Ecological Impact Assessment.....	6-72
6.5.1	Constraints-led Design Approach .....	6-72
6.5.2	Do -Nothing Scenario .....	6-72
6.5.3	Source-Pathway-Receptor .....	6-72
6.5.4	Potential Construction Phase Effects.....	6-73
6.5.4.1	Potential Construction Phase Effects on European Designated Sites .....	6-73
6.5.4.2	Potential Construction Phase Effects on Nationally Designated Sites .....	6-76
6.5.4.3	Potential Construction Phase Effects on Habitats and Flora.....	6-76
6.5.4.4	Potential Construction Phase Effects on Non-volant Mammals.....	6-79
6.5.4.5	Potential Construction Phase Effects on Bats .....	6-80
6.5.4.6	Potential Construction Phase Impacts on Avifauna .....	6-82
6.5.4.7	Potential Construction Phase Effects on Other Protected Fauna.....	6-87
6.5.5	Potential Operational Phase Impacts .....	6-87
6.5.5.1	Potential Operational Phase Effects on Designated Sites .....	6-88
6.5.5.2	Potential Operational Phase Effects on Habitats and Flora .....	6-89
6.5.5.3	Potential Operational Phase Effects on Non-Volant Mammals .....	6-89
6.5.5.4	Potential Operational Effects on Bats .....	6-90
6.5.5.5	Potential Operational Phase Effects on Avifauna .....	6-94
6.5.5.6	Potential Operational Phase Effects on Other Protected Fauna .....	6-101
6.5.6	Potential Effects during Decommissioning.....	6-101
6.5.7	Potential Cumulative Effects.....	6-101
6.6	Mitigation Measures.....	6-105
6.6.1	Mitigation Measures During Construction .....	6-105
6.6.1.1	Construction Phase Mitigation Measures – Designated Sites .....	6-105
6.6.1.2	Construction Phase Mitigation Measures – Habitats and Botanical Species .....	6-106
6.6.1.3	Construction Phase Mitigation Measures – Mammals .....	6-107
6.6.1.4	Construction Phase Mitigation Measures - Avifauna.....	6-108
6.6.1.5	Construction Phase Mitigation Measures - Other Protected Taxa .....	6-109
6.6.2	Mitigation Measures during Operation .....	6-110
6.6.2.1	Operational Phase Mitigation Measures – Designated Sites.....	6-110
6.6.2.2	Operational Phase Mitigation Measures – Habitats and Botanical Species.....	6-110
6.6.2.3	Operational Phase Mitigation Measures – Mammals.....	6-111
6.6.2.4	Operational Phase Mitigation Measures – Avifauna .....	6-111
6.6.2.5	Operational Phase Mitigation Measures - Other Protected Taxa.....	6-112
6.6.3	Mitigation Measures during Decommissioning .....	6-112
6.7	Residual Impacts .....	6-113
6.8	Conclusion .....	6-113

7.	<b>AQUATIC ECOLOGY</b> .....	7-1
7.1	Introduction .....	7-1
7.2	Statement of Authority .....	7-1
7.3	Methodology.....	7-2
7.3.1	Approach.....	7-2
7.3.2	Legislation and Guidance.....	7-2
7.3.3	Zone of Influence .....	7-3
7.3.4	Desk Study .....	7-3
7.3.5	Field Studies .....	7-4
7.3.5.1	Sampling Schedule .....	7-4
7.3.5.2	Biological Water Quality .....	7-5
7.3.5.3	Physico-chemical Sampling.....	7-6
7.3.5.4	Electrofishing Surveys.....	7-7
7.3.5.5	Freshwater Pearl Mussel Survey .....	7-7
7.3.5.6	General Habitat Descriptions.....	7-7
7.3.6	Assessment Criteria and Significance .....	7-8
7.3.6.1	Ecological Valuation of Watercourses.....	7-8
7.3.6.2	Impact Assessment Criteria.....	7-9
7.4	Receiving Environment.....	7-10
7.4.1	Overview .....	7-10
7.4.2	Biological Water Quality Data .....	7-11
7.4.2.1	EPA Q-value Data .....	7-13
7.4.3	Physico-chemical Sampling Data .....	7-13
7.4.4	Electrofishing Data.....	7-15
7.4.5	Freshwater Pearl Mussel .....	7-17
7.4.6	Baseline Habitat Summary .....	7-18
7.4.6.1	Ecological Valuation.....	7-18
7.4.6.2	Aquatic Receptor IEFs .....	7-19
7.5	Ecological Impact Assessment.....	7-21
7.5.1	Relevant Characteristics of the Proposal .....	7-21
7.5.1.1	Source-Pathway-Receptor Linkages.....	7-22
7.5.1.2	Construction and Environmental Management.....	7-23
7.5.2	Do Nothing Scenario .....	7-24
7.5.3	Potential Construction Phase Effects.....	7-24
7.5.3.1	Forestry Felling.....	7-24
7.5.3.2	Earthworks.....	7-29
7.5.3.3	Watercourse Crossings .....	7-36
7.5.3.4	Concrete and Hydrocarbons .....	7-39
7.5.4	Potential Operational Phase Effects .....	7-40
7.5.5	Potential Decommissioning Effects .....	7-41
7.5.6	Potential Cumulative Effects.....	7-42
7.5.6.1	Within Project Cumulative Effects.....	7-42
7.5.6.2	Catchment Scale Cumulative Effects.....	7-43
7.5.7	Monitoring.....	7-45
7.5.7.1	9.7.1 Construction Phase .....	7-45
7.5.7.2	9.7.1.1 Responsibilities.....	7-45
7.5.7.3	Daily Site Monitoring Procedure .....	7-45
7.5.7.4	Surface Water Monitoring.....	7-46
7.5.7.5	Water Quality Sampling – Action Trigger Points.....	7-47
7.5.8	WFD Implications .....	7-49
7.6	Conclusion .....	7-49
8.	<b>LAND, SOILS AND GEOLOGY</b> .....	8-1
8.1	Introduction .....	8-1
8.1.1	Background and Objectives .....	8-1



8.1.2	Statement of Authority .....	8-1
8.1.3	Scoping and Consultation .....	8-2
8.1.4	Relevant Legislation.....	8-2
8.1.5	Relevant Guidance .....	8-2
8.2	Assessment Methodology .....	8-3
8.2.1	Desk Study .....	8-3
8.2.2	Baseline Monitoring and Site Investigations .....	8-3
8.2.3	Impact Assessment Methodology .....	8-4
8.2.4	Limitations and Difficulties Encountered .....	8-6
8.3	Existing Environment.....	8-7
8.3.1	Site Description and Topography.....	8-7
8.3.2	Land (Land-Take) .....	8-7
8.3.3	Peat/Soils and Subsoils.....	8-8
8.3.4	Bedrock Geology .....	8-13
8.3.5	Geological Resource Importance .....	8-16
8.3.6	Geological Heritage Sites .....	8-16
8.3.7	Soil Contamination .....	8-19
8.3.8	Peat Stability Assessment.....	8-19
8.3.8.1	Introduction.....	8-19
8.3.8.2	Hydrological Considerations.....	8-19
8.3.8.3	Peat Slides – Lessons Learned .....	8-20
8.3.8.4	Peat Stability Desk Study and Investigations .....	8-20
8.3.8.5	PSRA FoS Results.....	8-21
8.3.8.6	PSRA Assessment and Interpretation of FoS Results.....	8-23
8.3.8.7	PSRA Conclusions.....	8-25
8.3.9	Receptor Sensitivity .....	8-25
8.4	Characteristics of the Proposed Development .....	8-29
8.5	Likely Significant Effects and Associated Mitigation Measures .....	8-32
8.5.1	Do Nothing Scenario .....	8-32
8.5.2	Construction Phase - Likely Significant Effects and Mitigation Measures.....	8-32
8.5.2.1	Effects of the Removal of the Existing Kilgarvan Wind Farm on Land, Peat/Subsoils. 8-32	
8.5.2.2	Effects on Land (Land-Take).....	8-33
8.5.2.3	Peat and Bedrock Excavation .....	8-34
8.5.2.4	Extension, Excavation and Reinstatement of the Borrow Pit .....	8-35
8.5.2.5	Proposed Substation Upgrade.....	8-36
8.5.2.6	Contamination of Soil by Leakages and Spillages and Alteration of Peat/Soil Geochemistry .....	8-37
8.5.2.7	Erosion of Exposed Subsoils and Peat During Construction of Infrastructure.....	8-38
8.5.2.8	Erosion of Exposed Soils/Subsoils and Peat During Tree Felling .....	8-39
8.5.2.9	Peat Instability and Failure.....	8-40
8.5.3	Operational Phase - Likely Significant Effects and Mitigation Measures .....	8-41
8.5.3.1	Site Road Maintenance .....	8-41
8.5.3.2	Site Vehicle/Plant Use.....	8-42
8.5.3.3	Use of Oils in Transformers .....	8-42
8.5.4	Decommissioning Phase - Likely Significant Effects and Mitigation Measures .....	8-43
8.5.5	Risk of Major Accidents and Disasters.....	8-43
8.5.6	Assessment of Health Effects.....	8-44
8.5.7	Potential Cumulative Effects.....	8-44
8.5.8	Post Construction Monitoring .....	8-44
9.	<b>WATER.....</b>	<b>9-1</b>
9.1	Introduction .....	9-1
9.1.1	Background and Objectives .....	9-1
9.1.2	Statement of Authority .....	9-1
9.1.3	Scoping and Consultation .....	9-2

9.1.4	Relevant Legislation.....	9-3
9.1.5	Relevant Guidance .....	9-4
9.2	Methodology.....	9-5
9.2.1	Desk Study .....	9-5
9.2.2	Baseline Monitoring and Site Investigations .....	9-5
9.2.3	Impact Assessment Methodology .....	9-6
9.2.4	Overview of Impact Assessment Process .....	9-8
9.2.5	Study Area.....	9-10
9.2.6	Limitations and Difficulties Encountered .....	9-10
9.3	Receiving Environment.....	9-10
9.3.1	Site Description and Topography.....	9-10
9.3.2	Water Balance .....	9-11
9.3.3	Regional Hydrology.....	9-12
9.3.3.1	Surface Water Flows .....	9-16
9.3.4	Site Drainage .....	9-17
9.3.5	Summary Flood Risk Assessment.....	9-20
9.3.6	Surface Water Quality .....	9-24
9.3.7	Hydrogeology.....	9-27
9.3.8	Groundwater Vulnerability .....	9-30
9.3.9	Groundwater Hydrochemistry .....	9-30
9.3.10	Water Framework Directive Water Body Status & Objectives.....	9-31
9.3.11	Groundwater Body Status .....	9-31
9.3.12	Surface Water Body Status.....	9-32
9.3.13	Designated Sites and Habitats.....	9-34
9.3.14	Water Resources .....	9-37
9.3.14.1	Groundwater Resources.....	9-37
9.3.14.2	Surface Water Resources .....	9-37
9.3.15	Receptor Sensitivity .....	9-39
9.3.15.1	Aquifers/Groundwater bodies.....	9-39
9.3.15.2	Surface Waters .....	9-39
9.3.15.3	Designated Sites.....	9-40
9.4	Characteristics of the Proposed Development .....	9-44
9.4.1	Proposed Drainage Management .....	9-45
9.4.2	Development Interaction with the Existing Forestry Drainage Network .....	9-46
9.5	Likely Significant Effects and Associated Mitigation Measures .....	9-47
9.5.1	Do -Nothing Scenario .....	9-47
9.5.2	Construction Phase - Likely Significant Effects and Mitigation Measures.....	9-47
9.5.2.1	Potential Surface Water Quality Effects from Clear Felling.....	9-47
9.5.2.2	Earthworks Resulting in Suspended Solids Entrainment in Surface Waters .....	9-52
9.5.2.3	Excavation Dewatering and Potential Effects on Surface Water Quality.....	9-58
9.5.2.4	Potential Effect on Groundwater Levels During Excavation Works.....	9-59
9.5.2.5	Potential Release of Hydrocarbons .....	9-60
9.5.2.6	Release of Cement-Based Products .....	9-61
9.5.2.7	Groundwater and Surface Water Contamination from Wastewater Disposal.....	9-62
9.5.2.8	Morphological Changes to Surface Watercourses.....	9-63
9.5.2.9	Potential Effects on Local Groundwater Well Supplies .....	9-64
9.5.2.10	Use of Siltbuster and Effect on Downstream Surface Water Quality.....	9-65
9.5.2.11	Potential Effects on Surface Water Drinking Supplies .....	9-67
9.5.2.12	Potential Effects on Hydrologically Connected Designated sites .....	9-68
9.5.2.13	Potential Effects on Surface and Groundwater WFD Status.....	9-69
9.5.3	Operational Phase - Likely Significant Effects and Mitigation Measures .....	9-70
9.5.3.1	Progressive Replacement of Natural Surface with Lower Permeability Surfaces.....	9-70
9.5.3.2	Runoff Resulting in Contamination of Surface Waters .....	9-72
9.5.3.3	Effect of Proposed Blanket Bog Rehabilitation.....	9-73
9.5.3.4	Assessment of WFD Effects.....	9-74
9.5.4	Decommissioning Phase - Likely Significant Effects and Mitigation Measures .....	9-74

9.5.5	Risk of Major Accidents and Disasters.....	9-75
9.5.6	Assessment of Health Effects.....	9-75
9.5.7	Cumulative Effects .....	9-76
9.5.7.1	Cumulative Effects with Commercial Forestry .....	9-79
9.5.7.2	Cumulative Effects with Agriculture.....	9-79
9.5.7.3	Cumulative Effects with One Off Housing Developments .....	9-79
9.5.7.4	Cumulative Effects with the Removal of the Existing Kilgarvan Turbines.....	9-80
9.5.7.5	Cumulative Effects with Other Wind Farms .....	9-80
9.5.8	Post Consent Monitoring.....	9-81
9.5.9	Non-Technical Summary.....	9-82
<b>10.</b>	<b>AIR QUALITY.....</b>	<b>10-1</b>
10.1	Introduction .....	10-1
10.1.1	Background .....	10-1
10.1.2	Statement of Authority .....	10-1
10.1.3	Relevant Guidance .....	10-1
10.2	Overview of Air Quality.....	10-2
10.2.1	Relevant Legislation.....	10-2
10.2.2	Air Quality Standards.....	10-3
10.2.2.1	Air Quality and Health.....	10-7
10.2.3	Methodology .....	10-9
10.2.4	Air Quality Zones .....	10-10
10.2.4.1	Air Quality Data Review.....	10-10
10.2.4.2	Dust .....	10-10
10.2.5	Baseline Air Quality.....	10-14
10.2.5.1	Sulphur Dioxide (SO <sub>2</sub> ) .....	10-14
10.2.5.2	Particulate Matter (PM <sub>10</sub> ).....	10-15
10.2.5.3	Nitrogen Dioxide (NO <sub>2</sub> ).....	10-15
10.2.5.4	Carbon Monoxide (CO) .....	10-15
10.2.5.5	Ozone (O <sub>3</sub> ).....	10-16
10.2.5.6	Dust .....	10-16
10.3	Likely and Significant Effects and Associated Mitigation Measures .....	10-16
10.3.1.1	'Do-Nothing' Effect .....	10-17
10.3.1.2	Construction Phase .....	10-17
10.3.1.3	Exhaust Emissions: Transportation to and from the site .....	10-18
10.3.1.4	Dust Emissions: Construction of Proposed Development Infrastructure .....	10-19
10.3.1.5	Dust Emissions: Transport to and from the site.....	10-21
10.3.2	Operational Phase.....	10-23
10.3.2.1	Exhaust Emissions: Proposed Development Infrastructure .....	10-23
10.3.2.2	Dust Emissions: Proposed Development Infrastructure .....	10-23
10.3.3	Overall Effect on Air Quality.....	10-24
10.3.3.1	Operational Phase: Carbon Offsetting .....	10-24
10.3.4	Decommissioning Phase .....	10-24
10.3.5	Cumulative Effects .....	10-25
10.3.5.1	Construction Phase .....	10-26
10.3.5.2	Operational Phase.....	10-26
<b>11.</b>	<b>CLIMATE.....</b>	<b>11-1</b>
11.1	Introduction .....	11-1
11.1.1	Background .....	11-1
11.1.2	Relevant Guidance .....	11-1
11.1.3	Scoping and Consultation .....	11-2
11.2	Statement of Authority.....	11-2
11.3	Climate Change and Greenhouse Gases.....	11-3
11.3.1	International Greenhouse Gas Emission and Climate Targets.....	11-3
11.3.1.1	Kyoto Protocol .....	11-3

11.3.1.2	Conference of the Parties .....	11-4
11.3.1.3	United Nations Sustainable Development Goals Report 2023.....	11-5
11.3.1.4	Climate Change Performance Index 2024.....	11-12
11.3.1.5	State of the Global Climate 2023.....	11-12
11.3.2	National Greenhouse Gas Emission and Climate Targets .....	11-13
11.3.2.1	Programme for Government.....	11-13
11.3.2.2	Climate Action and Low Carbon Development (Amendment) Act 2021.....	11-13
11.3.2.3	Climate Change Advisory Council 2023.....	11-14
11.3.2.4	Carbon Budgets .....	11-14
11.3.2.5	Sectoral Emissions Ceilings.....	11-14
11.3.2.6	Climate Action Plan 2024.....	11-15
11.3.2.7	Ireland's Climate Change Assessment .....	11-18
11.3.2.8	Greenhouse Gas Emissions Projections.....	11-19
11.3.3	Local Greenhouse Gas Emission and Climate Targets .....	11-20
11.3.3.1	Kerry County Council Local Authority Climate Action Plan 2024-2029.....	11-20
11.4	Climate and Weather in the Existing Environment .....	11-21
11.5	Calculating Carbon Losses and Savings from the Proposed Development.....	11-24
11.5.1	Background .....	11-24
11.5.2	Methodology for Calculating Losses .....	11-24
11.5.3	Carbon Losses and Savings Calculations .....	11-26
11.5.3.1	Carbon Losses.....	11-26
11.5.3.2	Carbon Savings.....	11-28
11.6	Likely Significant Effects and Associated Mitigation Measures .....	11-29
11.6.1	'Do-Nothing' Effect .....	11-29
11.6.2	Construction Phase .....	11-30
11.6.2.1	Greenhouse Gas Emissions .....	11-30
11.6.3	Operational Phase.....	11-32
11.6.3.1	Greenhouse Gas Emissions .....	11-32
11.6.4	Decommissioning Phase .....	11-33
11.7	Cumulative Assessment .....	11-34
11.7.1	Construction Phase .....	11-35
11.7.2	Operational Phase.....	11-35
11.7.3	Decommissioning Phase .....	11-36
<b>12.</b>	<b>NOISE &amp; VIBRATION .....</b>	<b>12-1</b>
12.1	Introduction .....	12-1
12.2	Legislation, Policy and Guidelines .....	12-2
12.3	Assessment Methodology and Significance Criteria.....	12-3
12.3.2	Potential Effects Scoped Out.....	12-11
12.3.3	Method of Baseline Characterisation.....	12-11
12.3.4	Criteria for the Assessment of Effects .....	12-13
12.4	Baseline Conditions.....	12-14
12.4.1	Current Baseline.....	12-14
12.4.2	Summary of Sensitive Receptors .....	12-15
12.5	Assessment of Likely Effects .....	12-16
12.5.1	Construction Noise Assessment Locations .....	12-16
12.5.2	Operational Noise Assessment Locations .....	12-16
12.5.3	Potential Noise Effects .....	12-17
12.5.4	Potential Construction Noise Effects.....	12-17
12.5.5	Potential Construction Vibration Effects .....	12-19
12.5.6	Potential Operational Noise Effects .....	12-19
12.5.7	Potential Decommissioning Noise Effects .....	12-37
12.6	Mitigation .....	12-37
12.6.1	Mitigation during Construction.....	12-37
12.6.2	Mitigation during Operation .....	12-38
12.6.3	Mitigation during Decommissioning .....	12-38

12.7	Assessment of Residual Effects.....	12-39
12.7.1	Residual Construction Effects .....	12-39
12.7.2	Residual Operational Effects.....	12-39
12.7.3	Residual Decommissioning Effects .....	12-39
12.8	Cumulative Effects.....	12-39
12.9	Summary.....	12-40
<b>13.</b>	<b>LANDSCAPE AND VISUAL .....</b>	<b>13-1</b>
13.1	Introduction .....	13-1
13.1.1	Statement of Authority .....	13-1
13.1.2	'Do-Nothing' Scenario .....	13-1
13.1.3	Proposed Development Description.....	13-2
13.1.4	Scope of this LVIA in the Context of the Proposed Development as a Wind Repowering Project .....	13-3
13.1.5	Mitigation by Design.....	13-3
13.1.6	Assessments of Other Alternative Turbine Layouts .....	13-5
13.1.7	Scoping Replies/Pre-Planning Meetings .....	13-5
13.2	Brief Methodology and Assessment Criteria .....	13-6
13.2.1	Scope and Definition of Landscape and Visual Impact (LVIA) Study Area .....	13-6
13.2.2	Guidelines.....	13-8
13.2.3	Baseline Landscape and Visual Information.....	13-8
13.2.4	Assessment of Potential Impacts .....	13-8
13.3	Visibility of the Proposed Development.....	13-9
13.3.1	ZTV Mapping: Theoretical Visibility of the proposed development.....	13-9
13.3.2	Half Blade ZTV of the proposed turbines .....	13-9
13.3.3	Comparative ZTV of the Existing and Proposed Developments .....	13-13
13.3.4	ZTV versus Actual Visibility .....	13-16
13.3.5	Visibility in Close Proximity to the Proposed Development - Route Screening Analysis .....	13-16
13.4	Landscape Baseline .....	13-21
13.4.1	Landscape Designations and Policy Context.....	13-21
13.4.2	Landscape Character of the Proposed Development Site.....	13-32
13.4.3	Landscape Characterisation in the Wind Energy Development Guidelines .....	13-39
13.4.4	Landscape Character of the Wider Study Area.....	13-42
13.5	Visual Baseline .....	13-48
13.5.1	Visual Receptors .....	13-48
13.5.2	Visual Receptor Preliminary Analysis .....	13-61
13.5.3	Photomontage Viewpoint Locations .....	13-63
13.6	Cumulative Context.....	13-64
13.6.2	Comparative Cumulative ZTV .....	13-69
13.7	Likely or Significant Landscape and Visual Effects .....	13-70
13.7.1	'Do-Nothing' Scenario .....	13-70
13.7.2	Construction Phase Effects .....	13-70
13.7.3	Operational Phase Effects.....	13-72
13.7.4	Discussion of Turbine Range and Landscape and Visual Effects .....	13-97
13.7.5	Decommissioning Phase Effects.....	13-98
13.8	Conclusion.....	13-98
<b>14.</b>	<b>ARCHAEOLOGY AND CULTURAL HERITAGE.....</b>	<b>14-1</b>
14.1	Introduction .....	14-1
14.1.1	The Proposed Development .....	14-1
14.1.2	Location and Topography.....	14-1
14.1.3	Statement of Authority .....	14-1
14.1.4	Relevant Legislation.....	14-1
14.1.4.1	Granada Convention .....	14-2
14.1.4.2	Kerry County Development Plan 2022-2028.....	14-3

14.1.4.3	Cork County Development Plan 2022-2028.....	14-6
14.1.4.4	Statutory Consultations.....	14-11
14.2	Assessment Methodology .....	14-13
14.2.1	Geographical Information Systems (GIS).....	14-13
14.2.2	Desktop Assessment .....	14-13
14.2.2.1	Record of Monuments and Places, Sites and Monuments Record and National Monuments.....	14-13
14.2.2.2	Cartographic Sources and Aerial Photography .....	14-14
14.2.2.3	Topographical Files - National Museum of Ireland .....	14-14
14.2.2.4	Archaeological Inventory Series .....	14-14
14.2.2.5	Record of Protected Structures .....	14-14
14.2.2.6	Excavations Database .....	14-14
14.2.2.7	National Inventory of Architectural Heritage (NIAH) .....	14-14
14.2.2.8	Previous Assessments .....	14-15
14.2.3	Field Inspection.....	14-16
14.2.3.1	Limitations Associated with Fieldwork.....	14-16
14.2.4	Assessment of Likely Significant Effects .....	14-16
14.2.4.1	Types of Impact.....	14-16
14.2.5	Methodology for the assessment of impacts on visual setting (indirect effects) .....	14-17
14.3	Existing Environment.....	14-18
14.3.1	Description of Proposed Development site.....	14-18
14.3.1.1	Turbine 1.....	14-18
14.3.1.2	Turbine 2.....	14-19
14.3.1.3	Turbine 3.....	14-20
14.3.1.4	Turbine 4.....	14-21
14.3.1.5	Turbine 5.....	14-22
14.3.1.6	Extension of Existing Borrow Pit South of T5 .....	14-22
14.3.1.7	Turbine 6.....	14-23
14.3.1.8	Turbine 7.....	14-24
14.3.1.9	Construction Compound .....	14-25
14.3.1.10	Turbine 8.....	14-26
14.3.1.11	Turbine 9.....	14-27
14.3.1.12	Turbine 10.....	14-28
14.3.1.13	Turbine 11.....	14-29
14.3.1.14	Proposed Haul Route (existing wind farm road).....	14-30
14.3.1.15	Cultural Heritage within the EIAR Site Boundary .....	14-31
14.3.2	Archaeological Heritage .....	14-35
14.3.2.1	UNESCO World Heritage Sites and those on Tentative List.....	14-35
14.3.2.2	National Monuments in State Care / Ownership / Guardianship.....	14-35
14.3.2.3	Recorded Monuments within the EIAR Site Boundary .....	14-35
14.3.2.4	New features recorded within the EIAR Boundary .....	14-38
14.3.2.5	Recorded Monuments within 5km of the nearest proposed turbine .....	14-41
14.3.2.6	Kerry Archaeological Landscapes .....	14-52
14.3.2.7	Excavations Database .....	14-57
14.3.2.8	Topographical Files of the National Museum of Ireland.....	14-59
14.3.3	Architectural and Cultural Heritage .....	14-61
14.3.3.1	Protected Structures .....	14-61
14.3.3.2	NIAH structures.....	14-65
14.3.3.3	Cartographic Evidence .....	14-65
14.3.3.4	Townlands and administrative boundaries .....	14-66
14.3.4	Grid Connection Route and Substation .....	14-66
14.3.5	The Proposed Haul Route .....	14-66
14.4	Likely Effects and Associated Mitigation Measures .....	14-67
14.4.1	Do-Nothing Scenario .....	14-67
14.4.2	Construction Phase Impacts.....	14-67
14.4.2.1	Construction Phase Potential Impacts (Indirect).....	14-67



14.4.2.2	Construction Phase Potential Impacts (Direct) .....	14-67
14.4.2.3	UNESCO World Heritage Sites (Direct Effects).....	14-68
14.4.2.4	National Monuments within the EIAR Site Boundary.....	14-68
14.4.2.5	Recorded Monuments within the EIAR Site Boundary .....	14-68
14.4.2.6	Monuments within 5km of the nearest proposed turbines.....	14-74
14.4.2.7	Kerry Archaeological Landscapes .....	14-75
14.4.2.8	Newly Recorded Archaeological Sites .....	14-75
14.4.2.9	Sub-surface Archaeological Potential .....	14-76
14.4.2.10	Protected Structures within the EIAR Site Boundary.....	14-77
14.4.2.11	NIAH Structures within the EIAR Site Boundary.....	14-77
14.4.3	Operational Phase Potential Impacts (Indirect) .....	14-78
14.4.3.1	UNESCO World Heritage Sites (Direct Effects).....	14-78
14.4.3.2	National Monuments within the EIAR Site Boundary.....	14-78
14.4.3.3	Recorded Monuments within the EIAR Site Boundary .....	14-78
14.4.3.4	Monuments within 5km of the nearest proposed turbines.....	14-80
14.4.3.5	Kerry Archaeological Landscapes .....	14-89
14.4.3.6	Newly Recorded Archaeological Sites .....	14-90
14.4.3.7	Protected Structures .....	14-91
14.4.3.8	NIAH.....	14-92
14.5	Cumulative Impacts .....	14-92
14.5.1	Cumulative Impacts (Direct Impacts – Construction stage).....	14-92
14.5.1.1	Cumulative impacts (direct) considering other wind farms within 25km .....	14-92
14.5.2	Cumulative Impacts (Indirect Impact on Setting).....	14-93
14.5.2.1	UNESCO World Heritage sites .....	14-93
14.5.2.2	National Monuments in State Care .....	14-93
14.5.2.3	Recorded Monuments, RPS and NIAH structures (5km) .....	14-93
14.5.2.4	Kerry Archaeological Landscapes .....	14-94
14.6	Conclusion .....	14-96
<b>15.</b>	<b>MATERIAL ASSETS.....</b>	<b>15-1</b>
15.1	Traffic and Transport.....	15-1
15.1.1	Introduction.....	15-1
15.1.1.1	Background and Objectives .....	15-1
15.1.1.2	Statement of Authority .....	15-1
15.1.1.3	Guidance on Assessment of Effects .....	15-2
15.1.1.4	Scoping and Consultation .....	15-2
15.1.1.5	Methodology and Section Structure .....	15-5
15.1.2	Receiving Environment .....	15-6
15.1.2.1	Site Location.....	15-6
15.1.2.2	Proposed Abnormal Size Load Delivery Route .....	15-6
15.1.2.3	Proposed Construction Traffic Haul Route .....	15-9
15.1.2.4	Proposed Grid Connection Route .....	15-9
15.1.3	Existing Traffic Volumes.....	15-9
15.1.3.1	Background Traffic Flows .....	15-9
15.1.3.2	Background Traffic Volumes for the Assumed Construction Year 2028 .....	15-12
15.1.4	Proposed Development and Traffic Generation.....	15-14
15.1.4.1	Proposed Access Junctions.....	15-14
15.1.4.2	Development Trip Generation – During Construction.....	15-14
15.1.4.3	Development Trip Generation – During Operation .....	15-19
15.1.4.4	Development Trip Generation – During Decommissioning .....	15-20
15.1.5	Construction Traffic Vehicles .....	15-20
15.1.6	Traffic Effects During Construction, Operation and Decommissioning of the Proposed Development .....	15-24
15.1.6.2	Link Capacity Assessment.....	15-37
15.1.6.3	Effect on Link Flows – During Operation.....	15-39
15.1.6.4	Effect on Junctions – During Construction .....	15-39

15.1.7	Traffic Management of Large Deliveries.....	15-41
15.1.8	Abnormal Load Route Assessment.....	15-41
15.1.9	Road Safety .....	15-54
15.1.10	Provision for Sustainable Modes of Travel .....	15-54
15.1.10.1	Walking and Cycling .....	15-54
15.1.10.2	Public Transport .....	15-54
15.1.11	Likely and Significant Effects and Associated Mitigation Measures.....	15-54
15.1.11.1	‘Do-Nothing’ Scenario .....	15-54
15.1.11.2	Construction Phase: Traffic and Transport.....	15-54
15.1.11.3	Operational Phase: Traffic and Transport.....	15-55
15.1.11.4	Decommissioning Phase: Traffic and Transport.....	15-55
15.1.11.5	Mitigation Measures.....	15-55
15.1.11.6	Residual Effects .....	15-57
15.1.11.7	Cumulative Effects .....	15-57
15.1.12	Conclusion.....	15-60
15.2	Telecommunications and Aviation .....	15-61
15.2.1	Introduction.....	15-61
15.2.1.1	Statement of Authority .....	15-62
15.2.2	Methodology and Guidance .....	15-62
15.2.3	Background .....	15-62
15.2.3.1	Broadcast Communications .....	15-62
15.2.3.2	Domestic Receivers .....	15-62
15.2.3.3	Other Signal Types.....	15-63
15.2.4	Preventing Electromagnetic Interference.....	15-63
15.2.4.1	National Guidelines .....	15-63
15.2.4.2	Scoping and Consultation .....	15-63
15.2.5	Likely Significant Effects and Associated Mitigation Measures .....	15-68
15.2.5.1	‘Do-Nothing’ Scenario .....	15-68
15.2.5.2	Construction Phase .....	15-68
15.2.5.3	Operational Phase.....	15-68
15.2.5.4	Decommissioning Phase.....	15-70
15.2.5.5	Cumulative Effect .....	15-70
15.3	Other Material Assets.....	15-70
15.3.1	Existing Built Services and Utilities.....	15-70
15.3.2	Waste Management .....	15-71
15.3.3	Likely Significant Effects and Associated Mitigation Measures .....	15-71
15.3.3.1	‘Do-Nothing’ Scenario .....	15-71
15.3.3.2	Construction Phase .....	15-71
15.3.3.3	Operational Phase.....	15-72
15.3.4	Cumulative Impact Assessment.....	15-72
16.	<b>MAJOR ACCIDENTS AND NATURAL DISASTERS.....</b>	<b>16-1</b>
16.1	Introduction .....	16-1
16.1.1	Statement of Authority .....	16-1
16.2	Assessment Methodology .....	16-2
16.2.1	Legislative Context .....	16-2
16.2.1.1	Legislation .....	16-2
16.2.1.2	Guidance Documents.....	16-3
16.2.2	Categorisation of the Baseline Environment.....	16-3
16.2.3	Impact Assessment Methodology .....	16-3
16.2.3.1	Introduction.....	16-3
16.2.3.2	Site Specific Risk Assessment Methodology.....	16-4
16.3	Baseline Conditions.....	16-7
16.3.2	Meteorological.....	16-11
16.3.3	Hydrological.....	16-12
16.3.4	Peat Stability.....	16-12



16.3.5	Traffic.....	16-13
16.3.6	Industrial Accident.....	16-14
16.3.7	Loss of Critical Infrastructure.....	16-14
16.3.8	Contamination.....	16-14
16.3.9	Health and Safety.....	16-15
16.3.10	Turbine Safety.....	16-15
16.3.11	Electromagnetic Interference .....	16-15
16.4	Risk Assessment .....	16-16
16.4.1	Likely Significant Effects.....	16-16
16.4.1.1	Do-Nothing Scenario .....	16-16
16.4.1.2	Assessment of Effect – Summary.....	16-21
16.4.2	Mitigation Measures.....	16-38
16.4.3	Residual Effects .....	16-38
16.4.4	Assessment of Cumulative Effects.....	16-38
16.4.4.1	Cumulative Impact Assessment.....	16-38
<b>17.</b>	<b>INTERACTION OF EFFECTS .....</b>	<b>17-1</b>
17.1	Introduction .....	17-1
17.1.1	Statement of Authority .....	17-3
17.2	Impact Interactions.....	17-3
17.2.1	Population and Human Health.....	17-3
17.2.2	Terrestrial Ecology.....	17-5
17.2.3	Freshwater Ecology.....	17-6
17.2.4	Land, Soils and Geology .....	17-7
17.2.5	Air Quality .....	17-7
17.2.6	Climate .....	17-7
17.2.7	Landscape and Visual .....	17-8
17.2.8	Vulnerability to Natural Disasters.....	17-8
17.3	Mitigation and Residual Impacts.....	17-8
<b>18.</b>	<b>SCHEDULE OF MITIGATION AND MONITORING PROPOSALS .....</b>	<b>18-1</b>
18.1	EIAR Mitigation Measures .....	18-1
18.2	EIAR Monitoring Measures .....	18-99