

Illaubaun Wind Farm

Location:	Turbine 1
Conditions:	Undrained (U), undrained surcharge (US), drained (D), drained surcharge (DS)
Inspected on:	Mar-25
Inspected by:	CE
Completed by:	SR
Date:	Mar-25

Hazard factors			Value				Rating criteria			Rating value	Weighting	Score	Comment	
			U	US	D	DS	0	1	2					3
Factor of Safety			6.4	2.7	5.2	4.7	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth: ~0.7m. Slope angle: 6.1°.
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide >15km away
		Evidence of peat movement (e.g. tension cracks, step features, compression features).	NA				NA	-	-	Yes	0	2	0	No evidence observed
	Subsoil conditions (visible in trial pits)	Subsoil type	Gravel / Firm glacial till				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	1	1	1	Nearest TP101 records - Firm, bluish-grey CLAY, containing occasional cobbles and boulders. The cobbles are angular to subrounded (flat), and composed of grey sandstone and mudstone. The boulders are also angular to subrounded, flat, and consist of grey sandstone and mudstone
		Peat fibres across transition to subsoil	NA				NA	Yes	Partially	No	0	1	0	Not recorded in TP log
		Peat wetness	Slowly squeezing				NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	0	2	0	Recorded as B2 in Von Post log
	Topography	General curvature downslope	Planar				NA	-	Planar	Convex	2	1	2	Generally planar
		Distance to the convexity break (only if previous factor is Convex)	NA				NA	> 100 m	50 - 100 m	< 50 m	0	1	0	
		Slope aspect (for high latitudes in northern hemisphere)	NA				NA	SW, S, SE	W, E	NW, N, NE	0	1	0	
	Hydrology	Distance from watercourse (m)	< 200				NA	> 300	200 - 300	< 200	3	2	6	Nearest watercourse ~110m away
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2	
		Surface water (water table level indicator)	NA				NA	Localised	Ponded in drains	Springs	0	1	0	No evident surface water ponding
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed
		Existing drainage ditches	NA				NA	Down slope	Varied / Oblique	Across slope	0	1	0	Drains generally downslope
		Annual rainfall	1000 - 1400 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	2	1	2	
	Vegetation	Bush	Grassland				NA	Dry heather	Grassland	Wetlands	2	1	2	Grassland
Forestry (if applicable)		NA				NA	Good growth	Fair	Stunted growth	0	1.5	0	Not within forestry	
Peat workings	Peat cuts presence	NA				NA	-	Cutaway / Turbary	Machine cut	0	1	0	No peat cutting observed	
	Peat cuts vs contour lines	NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No peat cutting observed	
Existing loads	Roads	Solid				NA	Solid	-	Floating	1	1	1	Solid roads	
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3	Worst case estimate	

Hazard	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Hazard _{total}	29
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Max. possible

Hazard ₀₋₁	0.2
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Consequence factors	Value	Rating criteria				Rating value	Weighting	Score	Comment
		0	1	2	3				
Volume of potential peat flow (function of distance from nearest watercourse and peat depth in the area)	Small	NA	Small	Medium	Large	1	3	3	Peat depth <1m
Downslope hydrology features	Minor undefined watercourse	NA	Bowl / contained	Minor undefined watercourse	Valley	2	1	2	N/A
Proximity from defined valley (m)	< 200	NA	> 500	200 - 500	< 200	3	1	3	
Downhill slope angle	Intermediate	NA	Horizontal	Intermediate	Steep	2	1	2	Slope angle: 6.1°.
Downstream aquatic environment	Sensitive	NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	sensitive
Public roads in potential peat flow path	NA	NA	Minor road	Local road	Regional road	0	1	0	no
Overhead lines in potential peat flow path	NA	NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	no
Buildings in potential peat flow path	NA	NA	Farm out-houses	-	Dwelling	0	1	0	no
Capability to respond (access and resources)	Poor	NA	Good	Fair	Poor	3	1	3	Fair

Consequences	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Consequences _{total}	15
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Max. possible

Consequences ₀₋₁	0.4
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Risk rating

Risk		Action required
0.00 - 0.20	Negligible	Normal site investigation
0.20 - 0.40	Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.
0.40 - 0.60	Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time supervision during construction.
0.60 - 1.00	High	Avoid construction in this area.

Risk rating = Hazard * Consequences

Risk rating =	0.28	0.45	=	0.13
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Peat Stability Risk Assessment (PSRA)



Illaubaun Wind Farm

Location:	Turbine 2
Conditions:	Undrained (U), undrained surcharge (US), drained (D), drained surcharge (DS)
Inspected on:	Mar-25
Inspected by:	CE
Completed by:	SR
Date:	Mar-25

Hazard factors			Value				Rating criteria				Rating value	Weighting	Score	Comment
			U	US	D	DS	0	1	2	3				
Factor of Safety			36.8	10.8	29.7	18.7	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth: ~0.4m. Slope angle: 1.8°.
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	1	0	Nearest slide >15km away
		Evidence of peat movement (e.g. tension cracks, step features, compression features).	NA				NA	-	-	Yes	0	2	0	No evidence observed
	Subsoil conditions (visible in trial pits)	Subsoil type	NA				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	0	1	0	No TP undertaken
		Peat fibres across transition to subsoil	NA				NA	Yes	Partially	No	0	1	0	No TP undertaken
		Peat wetness					NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	0	2	0	No TP undertaken
	Topography	General curvature downslope	Convex				NA	-	Planar	Convex	3	1	3	Convex slope breaks downslope
		Distance to the convexity break (only if previous factor is Convex)	50 - 100 m				NA	> 100 m	50 - 100 m	< 50 m	2	1	2	
		Slope aspect (for high latitudes in northern hemisphere)	SW, S, SE				NA	SW, S, SE	W, E	NW, N, NE	1	1	1	SE
	Hydrology	Distance from watercourse (m)	200 - 300				NA	> 300	200 - 300	< 200	2	2	4	~240m
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2	
		Surface water (water table level indicator)	Localised				NA	Localised	Ponded in drains	Springs	1	1	1	No evident surface water ponding
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed
		Existing drainage ditches	Down slope				NA	Down slope	Varied / Oblique	Across slope	1	1	1	Forestry drainage oriented generally downslope
		Annual rainfall	1000 - 1400 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	2	1	2	
	Vegetation	Bush	NA				NA	Dry heather	Grassland	Wetlands	0	1	0	Forestry
		Forestry (if applicable)	Good growth				NA	Good growth	Fair	Stunted growth	1	1.5	1.5	Forestry
Peat workings	Peat cuts presence	-				NA	-	Cutaway / Turbary	Machine cut	1	1	1	No peat cuts	
	Peat cuts vs contour lines	NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No peat cuts	
Existing loads	Roads	Solid				NA	Solid	-	Floating	1	1	1		
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3	Worst case estimate	

Hazard	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Hazard _{total}	32.5
Max. possible	93
Hazard ₀₋₁	0.35

Consequence factors	Value	Rating criteria				Rating value	Weighting	Score	Comment
		0	1	2	3				
Volume of potential peat flow (function of distance from nearest watercourse and peat depth in the area)	Small	NA	Small	Medium	Large	1	3	3	Peat depth 0.4m
Downslope hydrology features	NA	NA	Bowl / contained	Minor undefined watercourse	Valley	0	1	0	NA
Proximity from defined valley (m)	200 - 500	NA	> 500	200 - 500	< 200	2	1	2	240m from valley
Downhill slope angle	Intermediate	NA	Horizontal	Intermediate	Steep	2	1	2	Slope angle: 1.8°.
Downstream aquatic environment	Sensitive	NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	sensitive
Public roads in potential peat flow path	NA	NA	Minor road	Local road	Regional road	0	1	0	NA
Overhead lines in potential peat flow path	NA	NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	NA
Buildings in potential peat flow path	NA	NA	Farm out-houses	-	Dwelling	0	1	0	NA
Capability to respond (access and resources)	Poor	NA	Good	Fair	Poor	3	1	3	good

Consequences	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Consequences _{total}	12
Max. possible	33
Consequences ₀₋₁	0.36

Risk rating			
Risk		Action required	
0.00 - 0.20	Negligible	Normal site investigation	
0.20 - 0.40	Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.	
0.40 - 0.60	Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time supervision during construction.	
0.60 - 1.00	High	Avoid construction in this area.	
Risk rating =		Hazard * Consequences	
Risk rating =		0.35	0.36 = 0.13

Illaubau Wind Farm

Date: Mar-25

Weighting	Score	Comment
10	10	Peat depth: ~1.0 m. Slope angle:
2	0	Nearest slide >15km away
2	0	No evidence observed
1	1	Nearest TP102 Record: Firm wet grey CLAY with occasional cobbles. Gravel is subangular and flat fine to medium of sandstone. Cobbles are angular to subrounded and flat of grey sandstone

Hazard _{total}	44
Max. possible	99
Hazard_{0.1}	0.44

Consequences _{total}	13
Max. possible	33
sequences ₀₋₁	0.39

Consequences ₀₋₁	0.39
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Risk

Action required

Risk rating = Hazard * Consequences

Risk rating =

=	0.18
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Illaubau Wind Farm

Location:	Turbine 4
Conditions:	Undrained (U), undrained surcharge (US), drained (D), drained surcharge (DS)
Inspected on:	Jan-25
Inspected by:	CE
Completed by:	SR
Date:	Mar-25

Hazard factors			Value				Rating criteria			Rating value	Weighting	Score	Comment										
			U	US	D	DS	0	1	2					3									
Factor of Safety			4.75	1.93	3.80	1.58	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth: ~0.2 m. Slope angle: 5.8°.									
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide >15km away									
		Evidence of peat movement (e.g. tension cracks, step features, compression features).	NA				NA	-	-	Yes	0	2	0	No evidence observed									
	Subsoil conditions (visible in trial pits)	Subsoil type	Soft sensitive clay				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	3	1	3	Nearest TP (TP103) records wet bluish grey sandy clayey angular to subangular and flat fine to coarse shale GRAVEL with rare cobbles. Sand is medium to coarse. Cobbles are rounded to subangular and flat of sandstone.									
		Peat fibres across transition to subsoil	NA				NA	Yes	Partially	No	0	1	0	No/very shallow peat peat									
		Peat wetness	NA				NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	0	2	0	No/very shallow peat peat									
	Topography	General curvature downslope	Planar				NA	-	Planar	Convex	2	1	2	Generally planar slope									
		Distance to the convexity break (only if previous factor is Convex)	NA				NA	> 100 m	50 - 100 m	< 50 m	0	1	0	N/A									
		Slope aspect (for high latitudes in northern hemisphere)	SW, S, SE				NA	SW, S, SE	W, E	NW, N, NE	1	1	1	SE									
	Hydrology	Distance from watercourse (m)	> 300				NA	> 300	200 - 300	< 200	1	1	1	~300m									
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2										
		Surface water (water table level indicator)	NA				NA	Localised	Ponded in drains	Springs	0	1	0	No evident surface water ponding									
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed									
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed									
		Existing drainage ditches	Down slope				NA	Down slope	Varied / Oblique	Across slope	1	1	1										
		Annual rainfall	1000 - 1400 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	2	1	2										
	Vegetation	Bush	Grassland				NA	Dry heather	Grassland	Wetlands	2	1	2	Forestry									
		Forestry (if applicable)	Good growth				NA	Good growth	Fair	Stunted growth	1	1.5	1.5	Forestry									
	Peat workings	Peat cuts presence	NA				NA	-	Cutaway / Turbary	Machine cut	0	1	0	No Peat									
Peat cuts vs contour lines		NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No Peat										
Existing loads	Roads	Solid				NA	Solid	-	Floating	1	1	1											
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3	Worst case estimate										
<table><tr><th colspan="2">Hazard</th></tr><tr><td>0.0 - 0.3</td><td>Negligible</td></tr><tr><td>0.3 - 0.5</td><td>Low</td></tr><tr><td>0.5 - 0.7</td><td>Medium</td></tr><tr><td>0.7 - 1.0</td><td>High</td></tr></table> Hazard_{total} 29.5 Max. possible 94 Hazard₀₋₁ 0.31														Hazard		0.0 - 0.3	Negligible	0.3 - 0.5	Low	0.5 - 0.7	Medium	0.7 - 1.0	High
Hazard																							
0.0 - 0.3	Negligible																						
0.3 - 0.5	Low																						
0.5 - 0.7	Medium																						
0.7 - 1.0	High																						
Consequence factors		Value				Rating criteria				Rating value	Weighting	Score	Comment										
						0	1	2	3														
Volume of potential peat flow (function of distance from nearest watercourse and peat depth in the area)		NA				NA	Small	Medium	Large	0	3	0	No peat.										
Downslope hydrology features		NA				NA	Bowl / contained	Minor undefined watercourse	Valley	0	1	0	NA										
Proximity from defined valley (m)		> 500				NA	> 500	200 - 500	< 200	1	1	1	>500										
Downhill slope angle		Horizontal				NA	Horizontal	Intermediate	Steep	1	1	1	Slope angle: 5.8°.										
Downstream aquatic environment		Sensitive				NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	Sensitive										
Public roads in potential peat flow path		Minor road				NA	Minor road	Local road	Regional road	1	1	1	Minor, unnamed road downslope										
Overhead lines in potential peat flow path		NA				NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	NA										
Buildings in potential peat flow path		NA				NA	Farm out-houses	-	Dwelling	0	1	0	NA										
Capability to respond (access and resources)		Poor				NA	Good	Fair	Poor	3	1	3	Poor										
<table><tr><th colspan="2">Consequences</th></tr><tr><td>0.0 - 0.3</td><td>Negligible</td></tr><tr><td>0.3 - 0.5</td><td>Low</td></tr><tr><td>0.5 - 0.7</td><td>Medium</td></tr><tr><td>0.7 - 1.0</td><td>High</td></tr></table> Consequences_{total} 8 Max. possible 33 Consequences₀₋₁ 0.24														Consequences		0.0 - 0.3	Negligible	0.3 - 0.5	Low	0.5 - 0.7	Medium	0.7 - 1.0	High
Consequences																							
0.0 - 0.3	Negligible																						
0.3 - 0.5	Low																						
0.5 - 0.7	Medium																						
0.7 - 1.0	High																						
Risk rating																							
Risk		Action required																					
0.00 - 0.20	Negligible	Normal site investigation																					
0.20 - 0.40	Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.																					
0.40 - 0.60	Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time supervision during construction.																					
0.60 - 1.00	High	Avoid construction in this area.																					
Risk rating =		Hazard * Consequences																					
Risk rating =		0.31		0.24		=		0.08															

Hazard factors			Value				Rating criteria			Rating value	Weighting	Score	Comment	
			U	US	D	DS	0	1	2					3
Factor of Safety			23.5	8.9	3.8	1.6	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth: ~ 0.6m. Slope angle: 6.5°.
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide >15km away
		Evidence of peat movement (e.g. tension cracks, step features, compression features).	NA				NA	-	-	Yes	0	2	0	No evidence observed
	Subsoil conditions (visible in trial pits)	Subsoil type	NA				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	0	1	0	No TP undertaken
		Peat fibres across transition to subsoil	NA				NA	Yes	Partially	No	0	1	0	No TP undertaken
		Peat wetness	NA				NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	2	2	4	No TP undertaken
	Topography	General curvature downslope	Convex				NA	-	Planar	Convex	3	1	3	Convex slope break downslope of T5
		Distance to the convexity break (only if previous factor is Convex)	< 50 m				NA	> 100 m	50 - 100 m	< 50 m	3	1	3	
		Slope aspect (for high latitudes in northern hemisphere)	NW, N, NE				NA	SW, S, SE	W, E	NW, N, NE	3	1	3	NE
	Hydrology	Distance from watercourse (m)	< 200				NA	> 300	200 - 300	< 200	3	3	9	150m
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2	
		Surface water (water table level indicator)	NA				NA	Localised	Ponded in drains	Springs	0	1	0	
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	No evident surface water ponding
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed
		Existing drainage ditches	Down slope				NA	Down slope	Varied / Oblique	Across slope	1	1	1	Not observed
		Annual rainfall	1000 - 1400 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	2	1	2	
	Vegetation	Bush	NA				NA	Dry heather	Grassland	Wetlands	0	1	0	Forestry
		Forestry (if applicable)	Fair				NA	Good growth	Fair	Stunted growth	2	1.5	3	Forestry
Peat workings	Peat cuts presence	NA				NA	-	Cutaway / Turbary	Machine cut	0	1	0	No peat cutting	
	Peat cuts vs contour lines	NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No peat cutting	
Existing loads	Roads	NA				NA	Solid	-	Floating	0	1	0	No roads	
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3		
Hazard 0.0 - 0.3 Negligible 0.3 - 0.5 Low 0.5 - 0.7 Medium 0.7 - 1.0 High Hazard₀₋₁ 0.43 Hazard_{total} 43 Max. possible 99														
Consequence factors		Value	Rating criteria				Rating value	Weighting	Score	Comment				
			0	1	2	3								
Volume of potential peat flow (function of distance from nearest watercourse and peat depth in the area)		Small	NA	Small	Medium	Large	1	3	3	0.5m peat depth				
Downslope hydrology features		Bowl / contained	NA	Bowl / contained	Minor undefined watercourse	Valley	1	1	1	Contained hydrological feature (former lake) downslope				
Proximity from defined valley (m)		> 500	NA	> 500	200 - 500	< 200	1	1	1	>500				
Downhill slope angle		NA	NA	Horizontal	Intermediate	Steep	0	1	0	Slope angle: 6.5°				
Downstream aquatic environment		Sensitive	NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	Sensitive				
Public roads in potential peat flow path		NA	NA	Minor road	Local road	Regional road	0	1	0	NA				
Overhead lines in potential peat flow path		NA	NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	NA				
Buildings in potential peat flow path		Farm out-houses	NA	Farm out-houses	-	Dwelling	1	1	1	NA				
Capability to respond (access and resources)		Poor	NA	Good	Fair	Poor	3	1	3	Good				
Consequences 0.0 - 0.3 Negligible 0.3 - 0.5 Low 0.5 - 0.7 Medium 0.7 - 1.0 High Consequences₀₋₁ 0.33 Consequences_{total} 11 Max. possible 33														
Risk rating														
Risk		Action required												
0.00 - 0.20	Negligible	Normal site investigation												
0.20 - 0.40	Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.												
0.40 - 0.60	Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time supervision during construction.												
0.60 - 1.00	High	Avoid construction in this area.												
Risk rating =		Hazard * Consequences												
Risk rating =		0.43		0.33		=		0.14						

Hazard factors			Value				Rating criteria				Rating value	Weighting	Score	Comment
			U	US	D	DS	0	1	2	3				
Factor of Safety			29.8	7.30	24.06	12.60	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth = 0.32m. Slope angle: 3.1°.
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide > 15km away
		Evidence of peat movement (e.g. tension cracks, step features, compression features).	NA				NA	-	-	Yes	0	2	0	No evidence observed
	Subsoil conditions (visible in trial pits)	Subsoil type	Gravel / Firm glacial till				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	1	1	1	TP114 records :Soft blue slightly sandy slightly gravelly clayey SILT. Gravel is angular to subangular and flat fine to medium of shale and sandstone.
		Peat fibres across transition to subsoil	No				NA	Yes	Partially	No	3	1	3	Not recorded in TP log
		Peat wetness	Slowly squeezing				NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	3	2	6	Recorded as B2 in Von Post log
	Topography	General curvature downslope	Convex				NA	-	Planar	Convex	3	1	3	Convex slope break downslope of T6 location
		Distance to the convexity break (only if previous factor is Convex)	50 - 100 m				NA	> 100 m	50 - 100 m	< 50 m	2	1	2	
		Slope aspect (for high latitudes in northern hemisphere)	SW, S, SE				NA	SW, S, SE	W, E	NW, N, NE	1	1	1	SE
	Hydrology	Distance from watercourse (m)	< 200				NA	> 300	200 - 300	< 200	3	3	9	60m
		Surface moisture index (NDMI)	0 - 96				NA	0 - 96	96 -135	135 - 174	1	1	1	
		Surface water (water table level indicator)	NA				NA	Localised	Ponded in drains	Springs	0	1	0	No evident surface water ponding
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed
		Existing drainage ditches	NA				NA	Down slope	Varied / Oblique	Across slope	0	1	0	No observed drainage ditches within TP footprint
		Annual rainfall	1000 - 1400 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	2	1	2	
		Vegetation	Bush	Dry heather				NA	Dry heather	Grassland	Wetlands	1	2	2
	Forestry (if applicable)		NA				NA	Good growth	Fair	Stunted growth	0	1.5	0	No forestry
	Peat workings	Peat cuts presence	Cutaway / Turbary				NA	-	Cutaway / Turbary	Machine cut	2	1	2	Area appears to be historically cut-over
Peat cuts vs contour lines		NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No remaining peat cuts.	
Existing loads	Roads	NA				NA	Solid	-	Floating	0	1	0		
Time of year for construction			Late Summer, Autumn				NA	Spring	Winter, Early Autumn	Late Summer, Autumn	3	1	3	Worst case estimate

Hazard	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Hazard _{total}	45
Max. possible	106
Hazard_{0.1}	0.42

Consequence factors	Value	Rating criteria				Rating value	Weighting	Score	Comment
		0	1	2	3				
Volume of potential peat flow (function of distance from nearest watercourse and peat depth in the area)	Small	NA	Small	Medium	Large	1	3	3	0.3m peat depth
Downslope hydrology features	Bowl / contained	NA	Bowl / contained	Minor undefined watercourse	Valley	1	1	1	Lake downslope.
Proximity from defined valley (m)	< 200	NA	> 500	200 - 500	< 200	3	1	3	Lake downslope.
Downhill slope angle	Intermediate	NA	Horizontal	Intermediate	Steep	2	1	2	Slope angle: 3.1°.
Downstream aquatic environment	Sensitive	NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	
Public roads in potential peat flow path	NA	NA	Minor road	Local road	Regional road	0	1	0	
Overhead lines in potential peat flow path	NA	NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	
Buildings in potential peat flow path	NA	NA	Farm out-houses	-	Dwelling	0	1	0	
Capability to respond (access and resources)	Poor	NA	Good	Fair	Poor	3	1	3	

Consequences	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Consequences _{total}	14
Max. possible	33
Consequences₀₋₁	0.42

Risk rating		
Risk	Action required	
0.00 - 0.20	Negligible	Normal site investigation
0.20 - 0.40	Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.
0.40 - 0.60	Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time supervision during construction.
0.60 - 1.00	High	Avoid construction in this area.

Risk rating = Hazard * Consequences

Risk rating =

0.42	0.42
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 =

0.18

Illaubau Wind Farm

Date: Mar-25

Hazard factors			Value				Rating criteria				Rating value	Weighting	Score	Comment
			U	US	D	DS	0	1	2	3				
Factor of Safety			17.9	4.31	15	14.7	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth: 0.3, Slope angle: 3.3
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide >15km away
		Evidence of peat movement (e.g. tension cracks, step features, compression features).	NA				NA	-	-	Yes	0	2	0	No evidence observed
	Subsoil conditions (visible in trial pits)	Subsoil type	Gravel / Firm glacial till				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	1	1	1	TP116 Record: "Firm damp bluish grey slightly gravelly slightly sandy silty CLAY. Gravel is rounded to subangular fine to medium of shale and sandstone."
		Peat fibres across transition to subsoil	NA				NA	Yes	Partially	No	0	1	0	Not recorded in TP log
		Peat wetness	Slowly squeezing				NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	1	2	2	Recorded as B3 in Von Post log
	Topography	General curvature downslope	NA				NA	-	Planar	Convex	0	1	0	Flat
		Distance to the convexity break (only if previous factor is Convex)	NA				NA	> 100 m	50 - 100 m	< 50 m	0	1	0	
		Slope aspect (for high latitudes in northern hemisphere)	W, E				NA	SW, S, SE	W, E	NW, N, NE	2	1	2	E facing
	Hydrology	Distance from watercourse (m)	< 200				NA	> 300	200 - 300	< 200	3	1	3	50m
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2	
		Surface water (water table level indicator)	Localised				NA	Localised	Ponded in drains	Springs	1	1	1	No evident surface water ponding
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed
		Existing drainage ditches	Down slope				NA	Down slope	Varied / Oblique	Across slope	1	1	1	Drains oriented downslope
		Annual rainfall	< 1000 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	1	1	1	
	Vegetation	Bush	Grassland				NA	Dry heather	Grassland	Wetlands	2	1	2	Grassy heathland
		Forestry (if applicable)	NA				NA	Good growth	Fair	Stunted growth	0	1.5	0	No forestry
Peat workings	Peat cuts presence	NA				NA	-	Cutaway / Turbary	Machine cut	0	1	0	No peat cutting	
	Peat cuts vs contour lines	NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No peat cutting	
Existing loads	Roads	Solid				NA	Solid	-	Floating	1	1	1	Founded roads	
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3	Worst case estimate	

Hazard	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Max. possible	99
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Hazard ₀₋₁	0.29
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Consequence factors	Value	Rating criteria				Rating value	Weighting	Score	Comment
		0	1	2	3				
Volume of potential peat flow (function of distance from nearest watercourse and peat depth in the area)	Small	NA	Small	Medium	Large	1	3	3	0.3m peat depth
Downslope hydrology features	Bowl / contained	NA	Bowl / contained	Minor undefined watercourse	Valley	1	1	1	Lake adjacent to T3
Proximity from defined valley (m)	< 200	NA	> 500	200 - 500	< 200	3	1	3	>500
Downhill slope angle	Intermediate	NA	Horizontal	Intermediate	Steep	2	1	2	Slope angle: 3.3
Downstream aquatic environment	Sensitive	NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	sensitive
Public roads in potential peat flow path	Minor road	NA	Minor road	Local road	Regional road	1	1	1	Minor unnamed road
Overhead lines in potential peat flow path	NA	NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	NA
Buildings in potential peat flow path	NA	NA	Farm out-houses	-	Dwelling	0	1	0	NA
Capability to respond (access and resources)	Poor	NA	Good	Fair	Poor	3	1	3	Fair

Consequences	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Consequences _{total}	15
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Max. possible	33
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Consequences ₀₋₁	0.45
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Risk

Action required

0.00 - 0.20

Negligible

Normal site investigation

0.20 - 0.40

Low

Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.

0.40 - 0.60

Medium

Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time supervision during construction.

0.60 - 1.00

High

Avoid construction in this area.

$$\text{Risk rating} = \text{Hazard} * \text{Consequences}$$

Risk rating =

0.29

0.45

= 0.13

Peat Stability Risk Assessment (PSRA)

Illaubau Wind Farm

Location:	Substation
Conditions:	Undrained (U), undrained surcharge (US), drained (D), drained surcharge (DS)
Inspected on:	Mar-25
Inspected by:	CE
Completed by:	SR
Date:	Mar-25

Hazard factors			Value				Rating criteria				Rating value	Weighting	Score	Comment
			U	US	D	DS	0	1	2	3				
Factor of Safety			10.1	4.31	8	7.5	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	1	1	Peat depth: 0.7, Slope angle: 3.8
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide >15km away
		Evidence of peat movement (e.g. tension cracks, step features, compression features).	NA				NA	-	-	Yes	0	2	0	No evidence observed
	Subsoil conditions (visible in trial pits)	Subsoil type	Smooth rock				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	2	1	2	TP105 indicates bedrock
		Peat fibres across transition to subsoil	NA				NA	Yes	Partially	No	0	1	0	Not recorded in TP log
		Peat wetness	Slowly squeezing				NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	1	2	2	Recorded as B3 in Von Post log
	Topography	General curvature downslope	NA				NA	-	Planar	Convex	0	1	0	Flat
		Distance to the convexity break (only if previous factor is Convex)	NA				NA	> 100 m	50 - 100 m	< 50 m	0	1	0	
		Slope aspect (for high latitudes in northern hemisphere)	W, E				NA	SW, S, SE	W, E	NW, N, NE	2	1	2	E
	Hydrology	Distance from watercourse (m)	200 - 300				NA	> 300	200 - 300	< 200	2	1	2	250m
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2	
		Surface water (water table level indicator)	NA				NA	Localised	Ponded in drains	Springs	0	1	0	No evident surface water ponding
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	0	0	Not observed
		Existing drainage ditches	Down slope				NA	Down slope	Varied / Oblique	Across slope	1	1	1	Drains generally oriented downslope
		Annual rainfall	< 1000 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	1	1	1	
	Vegetation	Bush	Dry heather				NA	Dry heather	Grassland	Wetlands	1	1	1	Dry heathland
		Forestry (if applicable)	Good growth				NA	Good growth	Fair	Stunted growth	1	1	1	Partially forested
Peat workings	Peat cuts presence	NA				NA	-	Cutaway / Turbary	Machine cut	0	1	0	No peat cutting	
	Peat cuts vs contour lines	NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No peat cutting	
Existing loads	Roads	Solid				NA	Solid	-	Floating	1	1	1	Founded roads	
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3	Worst case estimate	

Hazard	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Hazard _{total}	19
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19

Max. possible

66

Hazard ₀₋₁	0.29
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Consequence factors	Value	Rating criteria				Rating value	Weighting	Score	Comment
		0	1	2	3				
Volume of potential peat flow (function of distance from nearest watercourse and peat depth in the area)	Small	NA	Small	Medium	Large	1	3	3	0.7m peat depth
Downslope hydrology features	Bowl / contained	NA	Bowl / contained	Minor undefined watercourse	Valley	1	1	1	NA
Proximity from defined valley (m)	200 - 500	NA	> 500	200 - 500	< 200	2	1	2	>500
Downhill slope angle	Horizontal	NA	Horizontal	Intermediate	Steep	1	1	1	Slope angle: 3.8
Downstream aquatic environment	Sensitive	NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	Sensitive
Public roads in potential peat flow path	Minor road	NA	Minor road	Local road	Regional road	1	1	1	Minor unnamed road
Overhead lines in potential peat flow path	NA	NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	NA
Buildings in potential peat flow path	NA	NA	Farm out-houses	-	Dwelling	0	1	0	NA
Capability to respond (access and resources)	Fair	NA	Good	Fair	Poor	2	1	2	Fair

Consequences	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Consequences_{total}

12

Max. possible

33

Consequences ₀₋₁	0.36
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Risk rating

Risk		Action required
0.00 - 0.20	Negligible	Normal site investigation
0.20 - 0.40	Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.
0.40 - 0.60	Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time supervision during construction.
0.60 - 1.00	High	Avoid construction in this area.

Risk rating = Hazard * Consequences

Risk rating =

0.29

0.36

$$=$$

0.10

Illaubau Wind Farm

Location:	PRA 1
Conditions:	Undrained (U), undrained surcharge (US), drained (D), drained surcharge (DS)
Inspected on:	Mar-25
Inspected by:	CE
Completed by:	SR
Date:	Mar-25

Hazard factors			Value				Rating criteria				Rating value	Weighting	Score	Comment									
			U	US	D	DS	0	1	2	3													
Factor of Safety			87.1	37.2	70.9	64.9	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth: ~0.7m. Slope angle: 0.4°.									
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide >15km away									
		Evidence of peat movement (e.g.	NA				NA	-	-	Yes	0	2	0	No evidence observed									
	Subsoil conditions (visible in trial pits)	Subsoil type	NA				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	0	1	0	No TP									
		Peat fibres across transition to	NA				NA	Yes	Partially	No	0	1	0	No TP									
		Peat wetness					NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	0	2	0	No TP									
	Topography	General curvature downslope	Convex				NA	-	Planar	Convex	3	1	3	Flat									
		Distance to the convexity break (only if previous factor is Convex)	< 50 m				NA	> 100 m	50 - 100 m	< 50 m	3	1	3										
		Slope aspect (for high latitudes in northern hemisphere)	W, E				NA	SW, S, SE	W, E	NW, N, NE	2	1	2	E									
	Hydrology	Distance from watercourse (m)	< 200				NA	> 300	200 - 300	< 200	3	1	3	70m									
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2										
		Surface water	NA				NA	Localised	Ponded in drains	Springs	0	1	0	No evident surface water ponding									
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed									
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed									
		Existing drainage ditches	Down slope				NA	Down slope	Varied / Oblique	Across slope	1	1	1	Drains generally oriented downslope									
		Annual rainfall	< 1000 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	1	1	1										
	Vegetation	Bush	NA				NA	Dry heather	Grassland	Wetlands	0	1	0	Dry heathland									
		Forestry	NA				NA	Good growth	Fair	Stunted growth	0	1.5	0										
	Peat workings	Peat cuts presence	Cutaway / Turbary				NA	-	Cutaway / Turbary	Machine cut	2	1	2	Possible historic turbary cutaway									
		Peat cuts vs contour lines	NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No visible peat cuts									
Existing loads	Roads	Solid				NA	Solid	-	Floating	1	1	1	Founded roads										
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3	Worst case estimate										
<table><tr><th colspan="2">Hazard</th></tr><tr><td>0.0 - 0.3</td><td>Negligible</td></tr><tr><td>0.3 - 0.5</td><td>Low</td></tr><tr><td>0.5 - 0.7</td><td>Medium</td></tr><tr><td>0.7 - 1.0</td><td>High</td></tr></table> Hazard_{total} 31 Max. possible 93 Hazard₀₋₁ 0.33														Hazard		0.0 - 0.3	Negligible	0.3 - 0.5	Low	0.5 - 0.7	Medium	0.7 - 1.0	High
Hazard																							
0.0 - 0.3	Negligible																						
0.3 - 0.5	Low																						
0.5 - 0.7	Medium																						
0.7 - 1.0	High																						
Consequence factors		Value		Rating criteria				Rating value	Weighting	Score	Comment												
				0	1	2	3																
Volume of potential peat flow		Small		NA	Small	Medium	Large	1	3	3	0.7m peat depth												
Downslope hydrology features		Bowl / contained		NA	Bowl / contained	Minor undefined watercourse	Valley	1	1	1													
Proximity from defined valley (m)		< 200		NA	> 500	200 - 500	< 200	3	1	3													
Downhill slope angle		Intermediate		NA	Horizontal	Intermediate	Steep	2	1	2	Slope angle: 0.4°.												
Downstream aquatic environment		Sensitive		NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2													
Public roads in potential peat flow path		Minor road		NA	Minor road	Local road	Regional road	1	1	1	Unnamed minor track												
Overhead lines in potential peat flow path		NA		NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0													
Buildings in potential peat flow path		NA		NA	Farm out-houses	-	Dwelling	0	1	0													
Capability to respond (access and resources)		Poor		NA	Good	Fair	Poor	3	1	3													
<table><tr><th colspan="2">Consequences</th></tr><tr><td>0.0 - 0.3</td><td>Negligible</td></tr><tr><td>0.3 - 0.5</td><td>Low</td></tr><tr><td>0.5 - 0.7</td><td>Medium</td></tr><tr><td>0.7 - 1.0</td><td>High</td></tr></table> Consequences_{total} 15 Max. possible 33 Consequences₀₋₁ 0.45														Consequences		0.0 - 0.3	Negligible	0.3 - 0.5	Low	0.5 - 0.7	Medium	0.7 - 1.0	High
Consequences																							
0.0 - 0.3	Negligible																						
0.3 - 0.5	Low																						
0.5 - 0.7	Medium																						
0.7 - 1.0	High																						
Risk rating																							
Risk		Action required																					
0.00 - 0.20	Negligible	Normal site investigation																					
0.20 - 0.40	Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.																					
0.40 - 0.60	Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time																					
0.60 - 1.00	High	Avoid construction in this area.																					
Risk rating = Hazard * Consequences Risk rating = 0.33 0.45 = 0.15																							

Illaubau Wind Farm

Location:	PRA 2
Conditions:	Undrained (U), undrained surcharge (US), drained (D), drained surcharge (DS)
Inspected on:	Mar-25
Inspected by:	CE
Completed by:	SR
Date:	Mar-25

Hazard factors			Value				Rating criteria				Rating value	Weighting	Score	Comment
			U	US	D	DS	0	1	2	3				
Factor of Safety			15.7	5.1	12.7	8.9	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth: ~0.48 m. Slope angle: 3.8°.
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide >15km away
		Evidence of peat movement (e.g. tension)	NA				NA	-	-	Yes	0	2	0	No evidence observed
	Subsoil conditions (visible in trial pits)	Subsoil type	NA				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	0	1	0	No nearby trial pit
		Peat fibres across transition to subsoil	NA				NA	Yes	Partially	No	0	1	0	No nearby trial pit
		Peat wetness					NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	0	2	0	No nearby trial pit
	Topography	General curvature downslope	NA				NA	-	Planar	Convex	0	1	0	Flat
		Distance to the convexity break (only if previous factor is Convex)	NA				NA	> 100 m	50 - 100 m	< 50 m	0	1	0	
		Slope aspect (for high latitudes in northern hemisphere)	SW, S, SE				NA	SW, S, SE	W, E	NW, N, NE	1	1	1	S
	Hydrology	Distance from watercourse (m)	200 - 300				NA	> 300	200 - 300	< 200	2	1	2	
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2	
		Surface water (water table level indicator)	NA				NA	Localised	Ponded in drains	Springs	0	1	0	No evident surface water ponding
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed
		Existing drainage ditches	Varied / Oblique				NA	Down slope	Varied / Oblique	Across slope	2	1	2	Drains generally oriented downslope, but varied orientations
	Vegetation	Annual rainfall	< 1000 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	1	1	1	
		Bush	NA				NA	Dry heather	Grassland	Wetlands	0	1	0	Forestry
		Forestry	Fair				NA	Good growth	Fair	Stunted growth	2	1.5	3	Forestry
	Peat workings	Peat cuts presence	NA				NA	-	Cutaway / Turbary	Machine cut	0	1	0	No peat cutting
		Peat cuts vs contour lines	NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No peat cutting
	Existing loads	Roads	NA				NA	Solid	-	Floating	0	1	0	No existing tracks
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3	Worst case estimate	
											Hazard _{total}		24	
											Max. possible		93	
											Hazard ₀₋₁		0.26	
Consequence factors		Value	Rating criteria				Rating value	Weighting	Score	Comment				
			0	1	2	3								
Volume of potential peat flow		Small	NA	Small	Medium	Large	1	3	3	Peat depth 0.48m				
Downslope hydrology features		Minor undefined watercourse	NA	Bowl / contained	Minor undefined watercourse	Valley	2	1	2	200-300m				
Proximity from defined valley (m)		200 - 500	NA	> 500	200 - 500	< 200	2	1	2	>500				
Downhill slope angle		Intermediate	NA	Horizontal	Intermediate	Steep	2	1	2	Slope angle: 3.8°.				
Downstream aquatic environment		Sensitive	NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	Sensitive				
Public roads in potential peat flow path		NA	NA	Minor road	Local road	Regional road	0	1	0	NA				
Overhead lines in potential peat flow path		NA	NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	NA				
Buildings in potential peat flow path		NA	NA	Farm out-houses	-	Dwelling	0	1	0	NA				
Capability to respond (access and resources)		Poor	NA	Good	Fair	Poor	3	1	3	NA				
											Consequences _{total}		14	
											Max. possible		33	
											Consequences ₀₋₁		0.42	
Risk rating														
Risk		Action required												
0.00 - 0.20		Negligible	Normal site investigation											
0.20 - 0.40		Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.											
0.40 - 0.60		Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time supervision											
0.60 - 1.00		High	Avoid construction in this area.											
Risk rating = Hazard * Consequences														
Risk rating = 0.26 0.42 = 0.11														

Illaubaun Wind Farm

Location:	PRA 3
Conditions:	Undrained (U), undrained surcharge (US), drained (D), drained surcharge (DS)
Inspected on:	Mar-25
Inspected by:	CE
Completed by:	SR
Date:	Mar-25

Hazard factors			Value				Rating criteria				Rating value	Weighting	Score	Comment
			U	US	D	DS	0	1	2	3				
Factor of Safety			49.6	28.7	40.9	50.4	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth: ~1.0 m. Slope angle: 0.4°.
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide >15km away
		Evidence of peat movement (e.g. tension)	NA				NA	-	-	Yes	0	2	0	No evidence observed
	Subsoil conditions (visible in trial pits)	Subsoil type	Gravel / Firm glacial till				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	1	1	1	Nearest tp 117 records : Firm bluish grey slightly sandy gravelly clayey SILT. Gravel is rounded to subangular fine to medium of mudstone and sandstone
		Peat fibres across transition to subsoil	NA				NA	Yes	Partially	No	0	1	0	
		Peat wetness	Slowly squeezing				NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	0	2	1	Von Post logging records value of B2 for wetness.
	Topography	General curvature downslope	NA				NA	-	Planar	Convex	0	1	0	Flat
		Distance to the convexity break (only if previous factor is Convex)	< 50 m				NA	> 100 m	50 - 100 m	< 50 m	3	1	3	
		Slope aspect (for high latitudes in northern hemisphere)	NW, N, NE				NA	SW, S, SE	W, E	NW, N, NE	3	1	3	NE
	Hydrology	Distance from watercourse (m)	< 200				NA	> 300	200 - 300	< 200	3	1	3	>300
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2	
		Surface water	Localised				NA	Localised	Ponded in drains	Springs	1	1	1	Localised
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed
		Existing drainage ditches	Varied / Oblique				NA	Down slope	Varied / Oblique	Across slope	2	1	2	Drains generally oriented downslope, but varied orientations
	Vegetation	Annual rainfall	< 1000 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	1	1	1	
		Bush	Dry heather				NA	Dry heather	Grassland	Wetlands	1	1	1	Forestry
		Forestry	Good growth				NA	Good growth	Fair	Stunted growth	1	1.5	1.5	Generally dry heathland
Peat workings	Peat cuts presence	Cutaway / Turbary				NA	-	Cutaway / Turbary	Machine cut	2	1	2	Historically cutaway	
	Peat cuts vs contour lines	NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No visible peat cuts	
Existing loads	Roads	Solid				NA	Solid	-	Floating	1	1	1	Founded roads	
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3	Worst case estimate	

Hazard	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Hazard _{total}	35.5
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Max. possible	96
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Hazard ₀₋₁	0.37
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Consequence factors	Value	Rating criteria				Rating value	Weighting	Score	Comment
		0	1	2	3				
Volume of potential peat flow	Small	NA	Small	Medium	Large	1	3	3	1m peat depth
Downslope hydrology features	Bowl / contained	NA	Bowl / contained	Minor undefined watercourse	Valley	1	1	1	
Proximity from defined valley (m)	< 200	NA	> 500	200 - 500	< 200	3	1	3	>500
Downhill slope angle	Horizontal	NA	Horizontal	Intermediate	Steep	1	1	1	Slope angle: 0.4%
Downstream aquatic environment	Sensitive	NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	Sensitive
Public roads in potential peat flow path	NA	NA	Minor road	Local road	Regional road	0	1	0	NA
Overhead lines in potential peat flow path	NA	NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	NA
Buildings in potential peat flow path	NA	NA	Farm out-houses	-	Dwelling	0	1	0	NA
Capability to respond (access and resources)	Poor	NA	Good	Fair	Poor	3	1	3	

Consequences	
0.0 - 0.3	Negligible
0.3 - 0.5	Low
0.5 - 0.7	Medium
0.7 - 1.0	High

Consequences _{total}	13
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Max. possible	33
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Consequences ₀₋₁	0.39
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Risk rating

Risk		Action required
0.00 - 0.20	Negligible	Normal site investigation
0.20 - 0.40	Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.
0.40 - 0.60	Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time supervision
0.60 - 1.00	High	Avoid construction in this area.

Risk rating = Hazard * Consequences

Risk rating =	0.37	0.39	=	0.15
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Illaubau Wind Farm

Location:	BP1
Conditions:	Undrained (U), undrained surcharge (US), drained (D), drained surcharge (DS)
Inspected on:	Mar-25
Inspected by:	CE
Completed by:	SR
Date:	Mar-25

Hazard factors			Value				Rating criteria				Rating value	Weighting	Score	Comment	
			U	US	D	DS	0	1	2	3					
Factor of Safety			9.3	3.6	7.6	6.2	-	≥ 1.3	1.3 - 1.0	≤ 1.0	1	10	10	Peat depth: 0.6m. Slope angle: 4.9°.	
Secondary factors	Slide history	Distance to previous slides (km)	NA				NA	5 - 10	< 5	On site	0	2	0	Nearest slide >15km away	
		Evidence of peat movement (e.g.	NA				NA	-	-	Yes	0	2	0	No evidence observed	
	Subsoil conditions (visible in trial pits)	Subsoil type	Gravel / Firm glacial till				NA	Gravel / Firm glacial till	Smooth rock	Soft sensitive clay	1	1	1	TP 106 records : Bluish grey sandy very silty angular to subangular and flat fine to medium shale GRAVEL. Sand is medium.	
		Peat fibres across transition to	Yes				NA	Yes	Partially	No	1	1	1	Rootlets removed into the subsoil	
		Peat wetness	NA				NA	Dry / Stands well	Slowly squeezing	Extremely wet / Undiggable	0	2	0		
	Topography	General curvature downslope	Planar				NA	-	Planar	Convex	2	1	2	Gently sloping	
		Distance to the convexity break (only if previous factor is Convex)	NA				NA	> 100 m	50 - 100 m	< 50 m	0	1	0		
		Slope aspect (for high latitudes in northern hemisphere)	W, E				NA	SW, S, SE	W, E	NW, N, NE	2	1	2	W	
	Hydrology	Distance from watercourse (m)	200 - 300				NA	> 300	200 - 300	< 200	2	1	2		
		Surface moisture index (NDMI)	96 -135				NA	0 - 96	96 -135	135 - 174	2	1	2		
		Surface water	NA				NA	Localised	Ponded in drains	Springs	0	1	0	No evident surface water	
		Evidence of piping (subsurface flow)	NA				NA	-	-	Yes	0	1	0	Not observed	
		Significant surface desiccation (previous summer was dry?)	NA				NA	-	-	Yes	0	1.5	0	Not observed	
		Existing drainage ditches	Down slope				NA	Down slope	Varied / Oblique	Across slope	1	1	1	Drains generally oriented downslope	
		Annual rainfall	< 1000 mm/yr				NA	< 1000 mm/yr	1000 - 1400 mm/yr	> 1400 mm/yr	1	1	1		
	Vegetation	Bush	Dry heather				NA	Dry heather	Grassland	Wetlands	1	1	1	Dry heathland	
		Forestry	NA				NA	Good growth	Fair	Stunted growth	0	1.5	0	No forestry	
Peat workings	Peat cuts presence	NA				NA	-	Cutaway / Turbary	Machine cut	0	1	0	No peat cutting		
	Peat cuts vs contour lines	NA				NA	Perpendicular	Oblique	Parallel	0	1	0	No peat cutting		
Existing loads	Roads	Solid				NA	Solid	-	Floating	1	1	1	No existing tracks		
Time of year for construction		Late Summer, Autumn				NA	Spring	Winter, Early Summer	Late Summer, Autumn	3	1	3	Worst case estimate		
Hazard total											27				
Hazard											Max. possible			102	
0.0 - 0.3 Negligible															
0.3 - 0.5 Low															
0.5 - 0.7 Medium											Hazard 0.1			0.26	
0.7 - 1.0 High															
Consequence factors			Value				Rating criteria				Rating value	Weighting	Score	Comment	
							0	1	2	3					
Volume of potential peat flow			Small				NA	Small	Medium	Large	1	3	3	Small	
Downslope hydrology features			Bowl / contained				NA	Bowl / contained	Minor undefined watercourse	Valley	1	1	1		
Proximity from defined valley (m)			200 - 500				NA	> 500	200 - 500	< 200	2	1	2	>500	
Downhill slope angle			Intermediate				NA	Horizontal	Intermediate	Steep	2	1	2	Slope angle: 4.9°	
Downstream aquatic environment			Sensitive				NA	Non-sensitive	Sensitive	Drinking water supply	2	1	2	Sensitive	
Public roads in potential peat flow path			NA				NA	Minor road	Local road	Regional road	0	1	0	NA	
Overhead lines in potential peat flow path			NA				NA	Phone lines	Electricity (LV)	Electricity (MV, HV)	0	1	0	NA	
Buildings in potential peat flow path			NA				NA	Farm out-houses	-	Dwelling	0	1	0	NA	
Capability to respond (access and resources)			Poor				NA	Good	Fair	Poor	3	1	3		
Consequences total											13				
Consequences											Max. possible			33	
0.0 - 0.3 Negligible															
0.3 - 0.5 Low															
0.5 - 0.7 Medium											Consequences 0.1			0.39	
0.7 - 1.0 High															
Risk rating															
Risk		Action required													
0.00 - 0.20		Negligible	Normal site investigation												
0.20 - 0.40		Low	Targeted site investigation, design of specific mitigation measures. Part time supervision during construction.												
0.40 - 0.60		Medium	Avoid construction in the area if possible. If unavoidable, detailed site investigation and design of specific mitigation measures. Full time												
0.60 - 1.00		High	Avoid construction in this area.												
Risk rating = Hazard * Consequences															
Risk rating = 0.26 0.39 = 0.10															

