

## Planning Ref.: 08.PA0044

# Grousemount Wind Farm County Kerry

# **Additional Information**

March 2016

Part 2 of 3

ESB International, Stephen Court, 18/21 St Stephen's Green, Dublin 2, Ireland. Phone +353 (0)1 703 8000 www.esbi.ie

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Grousemount Wind Farm –Additional Information

Planning Ref.: 08.PA0044 Grousemount Wind Farm, County Kerry Additional Information

Part 2 of 3

Contents

Appendix A to Peat Stability Risk Assessment at Grousemount Wind Farm Drawings

Appendix C to Peat Stability Risk Assessment at Grousemount Wind Farm PSRA Sheets



# PEAT STABILITY RISK ASSESSMENT Appendices A & C

## **Grousemount Wind Farm**

W78035-F105-018-R-0001

August 2015

ESB Wind Development Ltd.



## **APPENDIX A: Drawings**

DRAWING NO.	TITLE
QR320171-MWC-P-1001	Site Location Map
QR320171-MWC-P-1017	Site Layout - Orthophoto Background
QR320171-MWC-P-1018	Site Layout - Peat Probe Data And Estimated Peat Bandings
QR320171-MWC-P-1019	Site Layout - Ground Slope Map
QR320171-MWC-P-1020-Sh.1	Site Layout (1:2500) - Sheet 1 of 7 - Site Investigation Locations
QR320171-MWC-P-1020-Sh.2	Site Layout (1:2500) - Sheet 2 of 7 - Site Investigation Locations
QR320171-MWC-P-1020-Sh.3	Site Layout (1:2500) - Sheet 3 of 7 - Site Investigation Location
QR320171-MWC-P-1020-Sh.4	Site Layout (1:2500) - Sheet 4 of 7 - Site Investigation Locations
QR320171-MWC-P-1020-Sh.5	Site Layout (1:2500) - Sheet 5 of 7 - Site Investigation Locations
QR320171-MWC-P-1020-Sh.6	Site Layout (1:2500) - Sheet 6 of 7 - Site Investigation Locations
QR320171-MWC-P-1020-Sh.7	Site Layout (1:2500) - Sheet 7 of 7 - Site Investigation Locations
QR320171-MWC-P-6001	Borrow Pit / Repository A Sections
QR320171-MWC-P-6002	Borrow Pit / Repository B Sections
QR320171-MWC-P-6003	Borrow Pit / Repository C Sections
QR320171-MWC-P-6004	Borrow Pit / Repository D Sections
QR320171-MWC-P-6005	Borrow Pit / Repository E Sections
QR320171-MWC-P-6006	Borrow Pit / Repository F Sections
QR320171-MWC-P-6007	Borrow Pit / Repository G Sections
QR320171-MWC-P-6008	Borrow Pit / Repository H Sections
QR320171-MWC-P-6009	Borrow Pit / Repository I Sections





Ordnance Survey Ireland Licence No. EN 0023715-19 Copyright Ordnance Survey Ireland Government of Ireland
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	ATES TO TIM.		
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	TURBINE	LOCATIONS	
No.	Easting	Northing	Level (m)
G001	509157.000	571590.000	311.500
G002	509262.500	571347.000	335.500
G003	509350.700	571081.500	323.500
G004	509543.000	570736.000	306.000
G005	509860.521	570428.369	390.000
G006	510154.000	570247.000	405.500
G007	510087.531	569921.806	370.000
G008	508859.792	569947.807	393.000
G009	508625.093	569547.612	380.500
G010	509104.739	569708.857	390.000
G011	508795.802	569239.958	403.000
G012	509229.710	569319.939	460.000
G013	509650.621	569401.919	493.000
G014	509338.217	568932.126	465.000
G015	509054.743	568536.107	454.000
G016	507371.103	568711.078	403.000
G017	507145.152	568973.024	457.000
G018	507538.985	569062.782	410.000
G019	507329.115	569307.951	463.000
G020	507610.060	570304.738	370.000
G021	507992.980	570503.693	350.000
G022	507484.089	570623.670	395.000
G023	507117.167	570662.664	384.500
G024	506701.255	570549.690	401.500
G025	507777.120	572314.637	329.000
G026	507243.785	572069.293	384.000
G027	507605.781	572006.260	346.000
G028	507296.520	571721.278	345.000
G029	507005.834	571788.354	353.000
G030	506690.900	571605.395	344.000
G031	506385.675	571287.038	343.500
G032	505904.066	571195.486	367.500
G033	506096.027	571517.417	388.500
G034	506366.970	571771.361	390.500
G035	506663.382	571988.108	390.500
G036	507568.387	572430.328	367.000
G037	507216.785	572336.650	395.500
G038	506955.494	572364.104	396.000
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	MET. MAS	LOCATIONS	
No.	Easting	Northing	Level (m)
MM1	510015.0	570372.0	406
MM2	508956.0	569448.0	412
MM3	506879.0	570755.0	380
MM4	506232.0	571679.0	400

SITE BOUNDARY

ACCESS TRACK 

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Ordnance Survey Ireland Licence No. EN 0023715-19 Copyright Ordnance Survey Ireland Government of Ireland The following maps are shown on this drawing; 6322, 6323,6367,6368,6412 & 6413 (OSi Vector Mapping 1:5000)

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SITE BOUNDARY ACCESS TRACK PUBLIC ROAD WIDENING

TURBINE HARDSTANDING AREA

5m CONTOUR

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NOTES:

1. CO-ORDINATES TO ITM. 2. LEVELS TO MALIN HEAD DATUM.



	TURBINE	LOCATIONS			
No.	Easting	Northing	Level (m)		
G001	509157.0	571590.0	311.500		
G002	509262.5	571347.0	335.500		
G003	509350.7	571081.5	323.500		
G004	509543.0	570736.0	306.000		
G005	509860.5	570428.4	390.000		
G006	510154.0	570247.0	405.500		
G007	510087.5	569921.8	370.000		
G008	508859.8	569947.8	393.000		
G009	508625.1	569547.6	380.500		
G010	509104.7	569708.9	390.000		
G011	508795.8	569240.0	403.000		
G012	509229.7	569319.9	460.000		
G013	509650.6	569401.9	493.000		
G014	509338.2	568932.1	465.000		
G015	509054.7	568536.1	454.000		
G016	507371.1	568711.1	403.000		
G017	507145.2	568973.0	457.000		
G018	507539.0	569062.8	410.000		
G019	507329.1	569308.0	463.000		
G020	507610.1	570304.7	370.000		
G021	507993.0	570503.7	350.000		
G022	507484.1	570623.7	395.000		
G023	507117.2	570662.7	384.500		
G024	506701.3	570549.7	401.500		
G025	507777.1	572314.6	329.000		
G026	507243.8	572069.3	384.000		
G027	507605.8	572006.3	346.000		
G028	507296.5	571721.3	345.000		
G029	507005.8	571788.4	353.000		
G030	506690.9	571605.4	344.000		
G031	506385.7	571287.0	343.500		
G032	505904.1	571195.5	367.500		
G033	506096.0	571517.4	388.500		
G034	506367.0	571771.4	390.500		
G035	506663.4	571988.1	390.500		
G036	507568.4	572430.3	367.000		
G037	507216.8	572336.7	395.500		
G038	506955.5	572364.1	396.000		
	MET. MAS	<b>LOCATIONS</b>	6		
No.	Easting	Northing	Level (m)		
MM1	510015.0	570372.0	406		
MM2	508956.0	569448.0	412		
MM3	506879.0	570755.0	380		
MM4	506232.0	571679.0	400		







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TURBINE HARDSTANDING AREA

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1m CONTOUR

NOTES:

1. CO-ORDINATES TO ITM. 2. LEVELS TO MALIN HEAD DATUM.

> **TURBINE LOCATIONS** Northing Level (m) Easting No. 571590.0 G001 311.500 509157.0 G002 G003 571347.0 509262.5 335.500 509350.7 571081.5 323.500 G004 509543.0 570736.0 306.000 G005 509860.5 570428.4 390.000 G006 510154.0 570247.0 405.500 G007 510087.5 569921.8 370.000 G008 508859.8 569947.8 393.000 G009 508625.1 569547.6 380.500 G010 509104.7 569708.9 390.000 G011 508795.8 569240.0 403.000 G012 509229.7 569319.9 460.000 G013 509650.6 569401.9 493.000 G014 509338.2 568932.1 465.000 G015 509054.7 568536.1 454.000 507371.1 568711. G016 403.000 G017 507145.2 568973.0 457.000 G018 507539.0 569062.8 410.000 G019 507329.1 569308.0 463.000 G020 507610.1 570304.7 370.000 G021 507993.0 570503.7 350.000 G022 507484.1 570623.7 395.000 507117.2 570662.7 G023 384.500 506701.3 G024 570549.7 401.500 G025 507777.1 572314.6 329.000 G026 507243.8 572069.3 384.000 507605.8 346.000 G027 572006.3 507296.5 571721.3 345.000 G028 G029 507005.8 571788.4 353.000 506690.9 571605.4 G030 344.000 506385.7 571287.0 343.500 G031 G032 505904.1 571195.5 367.500 G033 506096.0 571517.4 388.500 G034 506367.0 571771.4 390.500 G035 506663.4 571988.1 390.500 507568.4 572430.3 G036 367.000 G037 507216.8 572336.7 395.500 G038 506955.5 572364.1 396.000 MET. MAST LOCATIONS Easting Northing Level (m) No. 
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>  MM1 MM2 MM3 MM4 406 412 380

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2. LEVELS TO	MALIN HEAD DATUM	l.	
	TURBINE	LOCATIONS	
No.	Easting	Northing	Level (m)
G001	509157.0	571590.0	311.500
G002	509262.5	571347.0	335.500
G003	509350.7	571081.5	323.500
G004	509543.0	570736.0	306.000
G005	509860.5	570428.4	390.000
G006	510154.0	570247.0	405.500
G007	510087.5	569921.8	370.000
G008	508859.8	569947.8	393.000
G009	508625.1	569547.6	380.500
G010	509104.7	569708.9	390.000
G011	508795.8	569240.0	403.000
G012	509229.7	569319.9	460.000
G013	509650.6	569401.9	493.000
G014	509338.2	568932.1	465.000
G015	509054.7	568536.1	454.000
G016	507371.1	568711.1	403.000
G017	507145.2	568973.0	457.000
G018	507539.0	569062.8	410.000
G019	507329.1	569308.0	463.000
G020	507610.1	570304.7	370.000
G021	507993.0	570503.7	350.000
G022	507484.1	570623.7	395.000
G023	507117.2	570662.7	384.500
G024	506701.3	570549.7	401.500
G025	507777.1	572314.6	329.000
G026	507243.8	572069.3	384.000
G027	507605.8	572006.3	346.000
G028	507296.5	571721.3	345.000
G029	507005.8	571788.4	353.000
G030	506690.9	571605.4	344.000
G031	506385.7	571287.0	343.500
G032	505904.1	571195.5	367.500
G033	506096.0	571517.4	388.500
G034	506367.0	5/1//1.4	390.500
G035	506663.4	5/1988.1	390.500
G036	50/568.4	5/2430.3	367.000
G037	507216.8	5/2336./	395.500
6038	506955.5	5/2364.1	396.000
	MET. MAS	T LOCATIONS	
No.	Easting	Northing	Level (m)
MM1	510015.0	570372.0	406
MM2	508956.0	569448.0	412
MM3	506879.0	570755.0	380
MM4	506232.0	571679.0	400
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	TURBINE	LOCATIONS	<b>.</b>
No.	Easting	Northing	Level (m)
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G011	508795.8	569240.0	403.000
G012	509229.7	569319.9	460.000
G013	509650.6	569401.9	493.000
G014	509338.2	568932.1	465.000
G015	509054.7	568536.1	454.000
G016	507371.1	568711.1	403.000
G017	507145.2	568973.0	457.000
G018	507539.0	569062.8	410.000
G019	507329.1	569308.0	463.000
G020	507610.1	570304.7	370.000
G021	507993.0	570503.7	350.000
G022	507484.1	570623.7	395.000
G023	507117.2	570662.7	384.500
G024	506701.3	570549.7	401.500
G025	507777.1	572314.6	329.000
G026	507243.8	572069.3	384.000
G027	507605.8	572006.3	346.000
G028	507296.5	571721.3	345.000
G029	507005.8	571788.4	353.000
G030	506690.9	571605.4	344.000
G031	506385.7	571287.0	343.500
G032	505904.1	571195.5	367.500
G033	506096.0	571517.4	388.500
G034	506367.0	571771.4	390.500
G035	506663.4	571988.1	390.500
G036	507568.4	572430.3	367.000
G037	507216.8	572336.7	395.500
G038	506955.5	572364.1	396.000
N-		Northing	
<b>NO.</b>			
	510015.0	570572.0	406
	<u> </u>	570755.0	412
MM3	5068/9.0	5/0/55.0	380
MM4 I	506232.0 I	5/1679.0	400

### SCALE BAR:

LEGEND:

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SITE BOUNDARY

ACCESS TRACK





Ordnance Survey Ireland Licence No. EN 0023715-19 Copyright Ordnance Survey Ireland Government of Ireland The following maps are shown on this drawing; 6412 & 6413 (OSi Vector Mapping 1:5000)

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		ESB W	ind Devel	opment L	td., Stepł	nen Co	ourt, 18-21 S	t. Ste	phen'	s Gre	en,
		Web: v	≥, ireland vww.esb.	i i ei: +350 ie	5 (U1) 703	38000					
	L	Registere	ed Office: as	s above Regi	stered in Ire	eland:No	o. 4/1139				
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DRAWING NUMBER QR320171-MWC-P-1020



### LEGEND:



SITE BOUNDARY ACCESS TRACK 

TURBINE HARDSTANDING AREA

5m CONTOUR 1m CONTOUR

NOTES: 1. CO-ORDINATES TO ITM.

	TURBINE	LOCATIONS	
No.	Easting	Northing	Level (m)
G001	509157.0	571590.0	311.500
G002	509262.5	571347.0	335.500
G003	509350.7	571081.5	323.500
G004	509543.0	570736.0	306.000
G005	509860.5	570428.4	390.000
G006	510154.0	570247.0	405.500
G007	510087.5	569921.8	370.000
G008	508859.8	569947.8	393.000
G009	508625.1	569547.6	380.500
G010	509104.7	569708.9	390.000
G011	508795.8	569240.0	403.000
G012	509229.7	569319.9	460.000
G013	509650.6	569401.9	493.000
G014	509338.2	568932.1	465.000
G015	509054.7	568536.1	454.000
G016	507371.1	568711.1	403.000
G017	507145.2	568973.0	457.000
G018	507539.0	569062.8	410.000
G019	507329.1	569308.0	463.000
G020	507610.1	570304.7	370.000
G021	507993.0	570503.7	350.000
G022	507484.1	570623.7	395.000
G023	507117.2	570662.7	384.500
G024	506701.3	570549.7	401.500
G025	507777.1	572314.6	329.000
G026	507243.8	572069.3	384.000
G027	507605.8	572006.3	346.000
G028	507296.5	571721.3	345.000
G029	507005.8	571788.4	353.000
G030	506690.9	571605.4	344.000
G031	506385.7	571287.0	343.500
G032	505904.1	571195.5	367.500
G033	506096.0	571517.4	388.500
G034	506367.0	571771.4	390.500
G035	506663.4	571988.1	390.500
G036	507568.4	572430.3	367.000
G037	507216.8	572336.7	395.500
G038	506955.5	572364.1	396.000
	MET MAS		<u> </u>
No	Easting	Northing	Level (m)
MM1	510015.0	570372.0	406
MM2	508956 0	569448 0	<u>412</u>
MM3	506879 0	570755 0	380
MM4	506232.0	571679 0	400
	500252.0		

## SCALE BAR:





Ordnance Survey Ireland Licence No. EN 0023715-19 Copyright Ordnance Survey Ireland Government of Ireland The following map is shown on this drawing; 6413 (OSi Vector Mapping 1:5000)

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	1	Dublin Web: \	2, Ir www	eland Te /.esb.ie	l: +353	3 (01) 703	38000	-		-		
		Registere	ed Of	fice: as abo	ove Regis	stered in Ire	eland:No.	471139				
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	ę	S. Bolton		D. Sh	iels	S. Sha	anley	F. Quigle	y	19	.08.20	15
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DRAWING NUMBER

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	TURBINE	LOCATIONS	
No.	Easting	Northing	Level (m)
G001	509157.0	571590.0	311.500
G002	509262.5	571347.0	335.500
G003	509350.7	571081.5	323.500
G004	509543.0	570736.0	306.000
G005	509860.5	570428.4	390.000
G006	510154.0	570247.0	405.500
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G014	509338.2	568932.1	465.000
G015	509054.7	568536.1	454.000
G016	507371.1	568711.1	403.000
G017	507145.2	568973.0	457.000
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G019	507329.1	569308.0	463.000
G020	507610.1	570304.7	370.000
G021	507993.0	570503.7	350.000
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G028	507296.5	571721.3	345.000
G029	507005.8	571788.4	353.000
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G031	506385.7	571287.0	343.500
G032	505904.1	571195.5	367.500
G033	506096.0	571517.4	388.500
G034	506367.0	571771.4	390.500
G035	506663.4	571988.1	390.500
G036	507568.4	572430.3	367.000
G037	507216.8	572336.7	395.500
G038	506955.5	572364.1	396.000
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PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED
ESB WIND DEVELOPMENT LTD.
Drawing Title SITE LAYOUT (1:2500)
SHEET 7 OF 7
SITE INVESTIGATION LOCATIONS
(Production Unit WIND DEVELOPMENT
Energy for
generations
ESB Wind Development Ltd., Stephen Court, 18-21 St. Stephen's Green, Dublin 2. Ireland Tel: +353 (01) 7038000
Web: www.esb.ie Registered Office: as above Registered in Ireland:No. 471139

Bolton	D. Shiels	S. Sha	anley		F. Quigley		19.
REF		No. of Shts	SIZE	F	REV	SCA	LE
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Level Difference		- 1	1.727	1.843	2.052	2.104	2.205	1.954	1.966	1.790	1.577 -	1.514	1.319	1.166				]		
Enormator			$\square$										COPYRIGHT All rights rese electronic or r purpose other	ESB rved. No pa mechanical, r than its de	rt of this wo including p signated pu	ork may be mo hotocopying, irpose, withou	odified or reprod recording, tapin it the written per	luced or cop ng or informa mission of th	ied in any form or by ation-and-retrieval sy ne ESB.	any means - graphic, stem, or used for any
<b>ESB</b> generations			$\downarrow$										Drawn L.Me	M	Produce	d McM	Verified D. Sh	niels	Approved S. Shanle	Approved date V 19.08.2015
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Dublin 2, Ireland Tel: +353 (01) 7038000 Web: www.esb.ie Registered Office: as above Registered in Ireland: No. 471139		Pi Pi	Date Urpose Tender	ofissu	Revision d	escription iminary u I [] C	Inless in (	dicate ≀□	d As-built 🔲	Drn.	Pro. V Revise	/er. App.	Drawing	g title BOF	ROW	/ PIT /	REPOS	ITOR	Y A SECT	ONS
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	Proposed Excavation Levels			341.872	340.000	340.000	340.000	340.000	340.000	340.000	340.000									
	Level Difference		•	1.461	3.387	3.226	3.133	2.914	3.185	3.081	3.302				'	I				
			ך											COPYRIGHT © ESB All rights reserved. No pa electronic or mechanical purpose other than its de	art of th I, includ	is work may be m ling photocopying ed purpose, witho	odified or repro , recording, tapi ut the written pe	duced or co ing or inform ermission of t	pied in any form or by ation-and-retrieval systems	any means - graphic, tem, or used for any
ESB Energy fo generatio	r ns													Drawn LMcM	Prod	luced LMcM	Verified D. SI	hiels	Approved S. Shanle	Approved date 19.08.2015
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Web: www.esb.ie Registered Office: as above Registered in Irela	nd: No. 471139		Pur Ter	pose of	issue - Pr Client appro	reliminar pval	n <b>y unless i</b> Constructio	ndicate ∘n ∏	d As-built ∏	Drn.	Revis	sed 🔲	J	Drawing title BOF	RRC	) DW PIT	REPOS	SITOR	Y B SECTI	ONS
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GROUSEMOU	INT WIND FAF	RM	Pro	duction	unit	WIND	DEVEL	ОРМЕ	NT					Drawing numb	ber PR	3201	71-N	wN	C-P-6	002

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	Proposed Excavation Levels		7.792 - 334.406 -	12.207 - 330.000 -	12.301 - 330.000 -	11.755 = 330.000 =	10.282 - 330.000 -	9.755 - 330,000 -	9.208 - 330.000 - 8.462 - 3.40.000 - 8.465 - 3.40.000 - 3.40.000	7.613 - 330.000 -		7.154 - 330.000 -	6.591 - 330.000 -	1.478 - 334.567 -	1						
ESB Wind Development Ltd. Stephen Co	urt 18-21 St Stephe	n's Green		0 19.08	3.15 ISSUED R	OR PLANNING					LMcM		DS SS	COPYRIGHT © ESB All rights reserved. No p electronic or mechanical purpose other than its de Drawn LMCM Client ref.	art of th I, includ esignate Prod	is work may be mo ling photocopying, ed purpose, withou suced LMCM No. of sheet	odified or repro recording, tapi ut the written pe Verified D. Sl	duced or co ing or inforr ermission of hiels Size	apied in ation- 3	any form or by an nd-retrieval syste syste Shanley Rev 0	y means - graphic, n, or used for any Approved date 19.08.2015 Scale As Shown
Dublin 2, Ireland Tel: +353 (01) 7038000 Web: www.esb.ie Registered Office: as above Registered in Ireland: No	0. 471139		ſ	Rev Dat Purpo Tendo	te ose of iss er □   C ract	Revision ue - Pre lient approva	description liminary al	unless in Constructio	ndicated 폐□	As-built 🗌	Drn.	Pro.	Ver. App	Drawing title BO	RRG	OWPIT /	REPOS	SITOR	YC	SECTIO	NS
ESB WIND DEVELO	OPMENT LTD.			Prod	uction ur	PL iit		IG APP		ON  T			_	Drawing numl	ber <b>PR</b>	3201	71-N	٨W	′C·	-P-60	03

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	Proposed Excavation Levels		360.831	355.000	355.000	355.000	355.000	355.000	355.000	355.000	355.000	355.000	355.000	355.000	355.000	355.000	355.000	361.405			
	Level Difference		2.957	8.652	8.322	7,941	8.047	8.709	9.087	10.470	8.907	9.008	10.446	9.279 -	7,891	8.788 -	9.001	2.714	·	•	
				<u></u>										COPYRIGHT @ ESB							
	6													All rights reserved. No p electronic or mechanica purpose other than its c	part of this II, includin lesignated	work may be mo g photocopying, l purpose, withou	odified or reprod recording, tapir ut the written per	luced or co ng or inform rmission of t	pied in any fo ation-and-ret he ESB	rm or by an rieval syste	/ means - graphic, n, or used for any
Energy gener	ations													Drawn	Produ	ICED	Verified D Sh	niels	Approve S Sh	d nanlev	Approved date
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Dublin 2, Ireland Tel: +353 (01) Web: www.esb.ie Registered Office: as above Registered	7038000 in Ireland: No. 471139			Rev. Pu Te	Date	Revisi issue - P Client appr	on descripti Prelimina Poval []	ion ary unle: Constr	ss indicate <sup>ruction</sup> ∏	d As-built [	Drr	n. Pro. Ve Revised	er. App	Drawing title BO	RRO	)WPIT /	REPOS	ITOR	Y D SE	СТЮ	NS
Client ESB WIND	DEVELOPMEN	IT LTD.			ontract	F	PLANN	IING A	<b>PPLICA</b>	TION											
Project GROUSEN		FARM		Pr	oduction	unit	WIND	D DEV	ELOPME	NT				Drawing num	<sup>ber</sup>	3201	71-N	лw	C-P	<b>P-60</b>	04

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	Proposed Excavation Levels		0.110 - 494.336 -	5.875 - 487.500 -	6 101 - 487 500 -	5.530 487,500	6.779 - 487.500 -	7.043 - 487.500 -	6.340 - 487.500 -	6.662 - 487.500 -	6.931 487.500	7.627 - 487.500 -	7.429 - 487.500 -	9.066 - 487.500 -	10.210 - 487.500 -	0 7.73 A87 600	9.423 <b>-</b> 487,500 <b>-</b>	5.885 - 487.500 -	2.754 - 487.500 -	1				
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Web: www.esb.ie Registered Office: as above Registered in Ire	eland: No. 471139				Pu	rpose	of issue - P Client appr	relimina oval 🗌	ry un Cor	Iless inc	licat D	ted As-built ∏	Din.	Revise	ed 🗌	ſ	Drawing title BO	RRC	) TIAMC	REPOS	SITOR	YES	ECTIO	NS
Client ESB WIND DE	VELOPMENT	LTD.				ontrac	F	PLANN	ING	APPL	IC/	ATION												
Project GROUSEMO	UNT WIND FA	RM			Pr	oducti	on unit	WIND	) DE	VELO	PM	IENT					Drawing numb	Per R	3201	71-	ww	C-l	P-60	05

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 Р 	Proposed Excavation Level	8.874 - 315.000 -	9.367 - 315.000 -	9.557 - 315.000 -	9.878 <b>-</b> 315.000 <b>-</b> 9.966 315.000	10.649 - 315.000 -	11.380 - 315.000 -	11.213 - 315.000 -	10.656 - 315.000 - 11.081 - 315.000		11.931 - 315.000 -	12.568 - 315.000 -	12.533 - 315.000 -	13.154 - 315.000 -		15.912 - 315.000 -	18.3// - 315.000 - 15.918 - 319.221 -	5.105 332.210		
Environ for													COI All r elec purp	PYRIGHT © ESB rights reserved. No p ctronic or mechanica pose other than its d	art of this w I, including   esignated p	ork may be mo ohotocopying, urpose, withou	odified or repro , recording, tapi ut the written pe	duced or co ing or inform ermission of t	pied in any form or by ation-and-retrieval sy: he ESB.	any means - graphic, stem, or used for any
generations													Dra	awn LMcM	Produce	∍d McM	Verified D. SI	hiels	Approved S. Shanle	Approved date v 19.08.2015
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ESB Wind Development Ltd., Stephen Court, 18-21	St. Stephen's Gree	en,	0 19.08.1	15 ISSUED FO	R PLANNIN	G				LMcM	LMcM [	os ss	1			1	1	A3	3 0	As Shown
Dublin 2, Ireland Tel: +353 (01) 7038000			Rev. Date	9	Revisio	n descriptio	'n			Drn.	Pro. V	er. App		rawing title						<u> </u>
WeD: WWW.eSD.IE Registered Office: as above Registered in Ireland: No. 471139			Purpos Tender	se of iss r ☐   Ci	ue - Pr ient appro	reliminar <sup>Ival</sup> 🗍	ry unless i Constructio	ndicated	As-built	ו	Revise	₀□	∥	BO	RRO	VPIT /	REPOS	SITOR	Y F SECTI	ONS
Client ESB WIND DEVELOPMEN	NT LTD.		Contra	act	Ρ	LANNI	NG APF	PLICAT	ION											
GROUSEMOUNT WIND	FARM		Produ	iction un	it	WIND	DEVEL	OPME	ΝТ					rawing num C	ber R3	201	71-N	ww	C-P-6	006

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	Level Difference		1			10t-6	11.101	12.355	14.294	16.280	17.494	9.133	0.623												
	6																	COPYRIGHT © ESB All rights reserved. No pa electronic or mechanical, purpose other than its de	art of ti I, inclue esignal	nis work may be m ding photocopying ted purpose, withou	odified or repro , recording, tap ut the written p	oduced or co bing or inforr ermission of	opied in nation-a the ESE	any form or by ar nd-retrieval syste 3.	y means - graphic, m, or used for any
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Client ESB WIND DEVELOPMENT LT	D.	_]['	Contra	ct	PL	AN	NING	APPL	ICATI	ON											
GROUSEMOUNT WIND FARM	М	][	Produc	ction ur	it V	WIN	D DE\	/ELOF	PMEN	IT					Drawing num	<sup>ber</sup>	3201	71-I	WN	C-P-6	009

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### **APPENDIX C: PSRA Sheets**

PSRA SHEET	PSRA SHEET	PSRA SHEET
Access Track 1: T1 - T2 Junction	T1 Turbine & Hardstanding	Substation
Access Track 2: T2 Spur	T2 Turbine & Hardstanding	Borrow Pit A
Access Track 3: T2 Junction - T3 Junction	T3 Turbine & Hardstanding	Borrow Pit B
Access Track 4: T3 Spur	T4 Turbine & Hardstanding	Borrow Pit C
Access Track 5: T3 Junction – Public Road	T5 Turbine & Hardstanding	Borrow Pit D
Access Track 6: Public Road – T6 Junction	T6 Turbine & Hardstanding	Borrow Pit E
Access Track 7: T6 Junction – T6	T7 Turbine & Hardstanding	Borrow Pit F
Access Track 8: T6 Junction – T4 Junction	T8 Turbine & Hardstanding	Borrow Pit G
Access Track 9: T4 Spur	T9 Turbine & Hardstanding	Borrow Pit H
Access Track 10: T4 Junction – T7 Junction	T10 Turbine & Hardstanding	Borrow Pit I
Access Track 11: T7 Spur	T11 Turbine & Hardstanding	Anemometer Mast 1
Access Track 12: T7 Junction – T10 Junction	T12 Turbine & Hardstanding	Anemometer Mast 2
Access Track 13: T10 Junction – T8	T13 Turbine & Hardstanding	Anemometer Mast 3
Access Track 14: T10 Junction – T9	T14 Turbine & Hardstanding	
Access Track 15: T9 Junction – T11 Junction	T15 Turbine & Hardstanding	
Access Track 16: T11 Junction – Borrow Pit G	T16 Turbine & Hardstanding	
Access Track 17: Borrow Pit G – T13	T17 Turbine & Hardstanding	
Access Track 18: T12 Spur	T18 Turbine & Hardstanding	
Access Track 19: T14 Spur	T19 Turbine & Hardstanding	
Access Track 20: Borrow Pit G – T15 Spur Ch. 900	T20 Turbine & Hardstanding	
Access Track 21: T15 Spur Ch. 900 – T15	T21 Turbine & Hardstanding	
Access Track 22: T11 Junction – Borrow Pit F	T22 Turbine & Hardstanding	
Access Track 23: Borrow Pit F – River Roughty	T23 Turbine & Hardstanding	
Access Track 24: River Roughty – T16	T24 Turbine & Hardstanding	
Access Track 25: T16 - T18	T25 Turbine & Hardstanding	
Access Track 26: T16 – T17	T26 Turbine & Hardstanding	
ACCESS TRACK 27: T17 – Ch. 1850 (Including T19 Spur)	T27 Turbine & Hardstanding	
Access Track 28: Ch. 1850 – Ch. 1400	T28 Turbine & Hardstanding	
Access Track 29: Ch. 1400 – Borrow Pit E	T29 Turbine & Hardstanding	
Access Track 30: Borrow Pit E – Main Spine Road Parts 3 & 4 Intersection	T30 Turbine & Hardstanding	

### Peat Stability Risk Assessment for Grousemount Wind Farm

PSRA SHEET	PSRA SHEET	PSRA SHEET
Access Track 31: T20 Spur	T31 Turbine & Hardstanding	
Access Track 32: Main Spine Road Parts 3 & 4 Intersection – T24 Junction	T32 Turbine & Hardstanding	
Access Track 33: T22 Spur	T33 Turbine & Hardstanding	
Access Track 34: T24 Spur	T34 Turbine & Hardstanding	
Access Track 35: T24 Junction – T35 Junction	T35 Turbine & Hardstanding	
Access Track 36: T35 Spur	T36 Turbine & Hardstanding	
Access Track 37: T35 Junction – T31	T37 Turbine & Hardstanding	
Access Track 38: T31 – T30 Site Access Junction	T38 Turbine & Hardstanding	
Access Track 39: T30 Site Access (Ch. 1450 – Ch. 2350)		
Access Track 40: T30 Site Access (Ch. 650 – Ch. 1450)		
Access Track 41: T30 Site Access (Ch. 0 – Ch. 650)		
Access Track 42: T30 Site Access Junction – T29 Junction		
Access Track 43: T30 Spur		
Access Track 44: T29 Spur		
A45: T29 Junction – T27		
Access Track 46: T27 – T30 Site Access Junction		
Access Track 47: T26 Spur		
Access Track 48: T38 Spur (Ch. 80 – Ch. 300)		
Access Track 49: T38 Spur (Ch. 300 – Ch. 410)		
Access Track 50: T36 Spur		
Access Track 51: T25 Site Access (Ch. 400 – Ch. 1650)		
ACCESS TRACK 52: T25 Site Access (Ch. 230 – Ch. 400) Farmland		
Access Track 53: T25 Site Access (Ch. 0 – Ch. 230) Coillte		
Access Track 54: Everwind Wind Farm Site Entrance		
Access Track 55: Coillte Track Through Everwind Wind Farm		

				Doot Stab	ility Dick	Accord	nt	Location	Assocs Teach 1. T1 T2 Junction					
	<b>ESE</b> Internat	ional		Grousem	ount Wind	Farm	in	Inspected on:	2015 ESBI/BLP					
				arousem		1 ann		Completed by: Date:	SS August 2015					
		1				A		O lumetian	hagartono					
No.	Likelihood/ Impact Factors	Value		Rating		Access I Bating Value	Weighting	2 Junction Score	Comment					
		Talde	1	2	3 LIKELIH	OOD	Treighting	otore						
1.0	Ground Conditions													
1.1	Peat Peat Donth	0.7m	<1m	- 3m	1.2m	1	2		Passed on post probes and site investigation carried out by IGSL in 2015.					
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.					
	Subsoil Characteristics	Stiff gravelly silt /	Gravel/ Firm											
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	boulders / rock No	Glacial Till Yes	Smooth Rock Partially	Soft Sensitive Clay No	3	1	1	I rial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.					
2.0	Topography													
21	Situation	345m	<200m		>200m	9	1		From LiDar					
2.2	Slope Aspect	E	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar					
	Slope Angle								From Liber					
2.3	Slope Angle - Ground Surface Geomorphology	>10°	<3°	>7º	3º - 7º	2	2	4	From LiDar					
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	2 From LiDar					
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar					
	Hydrology													
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar					
3.2 3.3	uistance from head of defined watercourse Surface water	< 200m Localised	> 300m Localised	200 - 300m Ponded in drains	< 200m Springs/	3	1	3	From Libar					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk					
3.5	Existing drainage ditches Annual Rainfall	Varied	<1000 mm/vr	Varied / Oblique	Across slope	2	1	2	From Met Éireann. Based on average rainfall from 1985 - 2014					
4.0	Other Factors	2 1400 milloyi	< root mintyf		2 1400 milloyi	3			2014.					
	Vegetation													
4.1	Vegetation Forestry (if applicable)	Grasslands N/A	Dry Heather Good Growth	Grasslands Fair	Wetlands Stunted Growth	2	1	2	From aerial photography and site walk From aerial photography and site walk					
	Slide History													
4.3	Previous slides in locality Evidence of movement in peat (e.g. tension cracks, step	< 5km	> 5km	< 5km	On site	2	2	4	From Geological Survey of Ireland					
	features. compression features) Land Use	110	110		103									
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk					
4.6	Existing roads in place	No existing road. Value assumed.												
4.7	Time of year for construction	Worst case assumed.												
	Likelihood Rating	Likelihood Score Scale												
		0.0-0.3 Negligible 1												
							Likalibaad	0.61	0.3-0.5 Low 2					
							Likelinood	0.01	0.7-1.0 High 4					
					IMPAC	ст								
5.0	Impact Factors		Small volume	Madium	Datastial (as Das									
5.1 5.2	Volume of peat in potential peat flow Downslope features	Medium Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	(1.000 - Minor undefined	burst Valley	2	3	6	From LiDar					
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar					
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar					
5.5 5.6	Public roads in potential peat flow path	Sensitive Local Road	Non-sensitive	Sensitive Local Road	supply Regional Road	2	1	2	From aerial photography and site walk					
5.7	Overhead lines in potential peat flow path	Electricity, LV	Phone Lines	Electricity, LV	Electricity MV, HV	2	1	2	From service drawings and site walk					
5.8 5.9	Buildings in potential peat flow path Capability to respond (access and resources)	Dwelling Good	No	Farm out-houses	Dwelling	3	1	3	From aerial photography and site walk Based on contractor facilities on site during construction					
	Impact Rating													
							Total	25	Impact Score Scale					
-							wax Possible	33	0.0-0.3 Negligible 1 0.3-0.5 Low 2					
							Impact	0.76	0.5-0.7 Medium 3					
									0.7-1.0 High 4					
		I	I	I	I	I	I	L	I					
					RISK RA	TING								
			Risk Rating =	Likelihood *	Impact									
			Risk Rating =	0.61	0.76	- 1	0.46	Substantial						
		Risk Rating	Risk Level	Action Required										
		0.0 - 0.18	Insignificant	Normal SI										
		0.19 - 0.42	Significant Substantial	Targeted SI, desig Avoid construction	n of specific mitigati in the area if possib	ion measures. Part ble. If unavoidable, c	time supervision du letailed SI and desi	iring construction. gn of specific mitiga	tion measures. Full					
		0.67 - 1.0	Serious	time supervision di Avoid construction	uring construction. in this area.									











### Peat Stability Risk Assessment

Grousemount Wind Farm

 Location:
 Access Track 6:
 Public Road - T6 Junction

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

					Α	ccess Track	6: Public Roa	ad - T6 Juncti	on				
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment				
	· · · ·		1	2	3								
		r			LIKELIH		1	1					
1.0	Ground Conditions												
<u> </u>	Peat								Deceder restand				10.01 := 0045
1.1		1.4m	<1m	>3m	1-3m Extremely Wet/	3	2	6	Based on peat pro	bes and site i	nvestigation c	arried out by	IGSL in 2015.
1.2		Stands Well	Dry/ Stands well	Slowly squeezing	Undiggable	1	1	1	I rial pits carried ou	it by IGSL in i	2015.		
	Subsoil Characteristics	Medium dense	Gravel/ Firm		Soft Sensitive								
1.3		silty gravel	Glacial Till	Smooth Rock	Clay	1	1	1	I rial pits carried ou	It by IGSL in 1	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	I rial pits carried ou	ut by IGSL in :	2015.	_	_
2.0	Topography												
-								_	F 115				
2.1	Elevation OD [m]	340m	<200m		>200m	3	1	3	From LiDar				
2.2		E	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	>10°	<3°	>7°	3º - 7º	2	2	4	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes $\ge 3^{\circ}$	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m Springs/	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	,				
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Eireann.	Based on av	erage rainfall	from 1985 - 2	2014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk		
	Slide History												
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological S	urvey of Irela	nd		
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Early	Floating Road	1	1	1	No existing road. V	alue assume	d.		
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assum	ed.			
	Likelihood Rating									r		1	1
							Total	47		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.65		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
					IMPAG	CT							
5.0	Impact Factors		Small volume	Medium	Potential for Bog								
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 -	burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and sit	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk				
5.8	Buildings in potential peat flow path	Farm out-houses	No	Farm out-houses	Dwelling	2	1	2	From aerial photography and site walk				
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities or	site during co	onstruction.	
	Impact Rating												1
							Total	22		Impac	t Score	Scale	
							Max Possible	33		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
1		Î		1			Impost	0.67		0507	Modium	2	







### Peat Stability Risk Assessment

Grousemount Wind Farm

 Location:
 Access Track 8:
 T6 Junction - T4 Junction

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

					A	ccess Track	8: T6 Junctio	on - T4 Junctio	on					
No.	Likelihood/ Impact Factors	Value	1	Rating	3	Rating Value	Weighting	Score	Comment					
	1	I	I '	-	LIKELIH	OOD	I							
1.0	Ground Conditions													
	Peat													
1.1	Peat Depth	1m	<1m	>3m	1-3m	3	2	6	Based on peat prot	bes and site i	nvestigation c	arried out by	IGSL in 2015.	
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried ou	t by IGSL in	2015.			
	Subsoil Characteristics													
1.3	Subsoil Type	Soft sandy gravelly clay	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried ou	t by IGSL in	2015.			
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	t by IGSL in	2015.			
2.0	Topography													
	Situation													
2.1	Elevation OD [m]	340m	<200m		>200m	3	1	3	From LiDar					
2.2	Slope Aspect	E	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar					
	Slope Angle													
2.3	Slope Angle - Ground Surface	>10°	<3°	>7°	3° - 7°	2	2	4	From LiDar					
	Geomorphology													
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar					
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar					
3.0	Hydrology													
	Hydrology													
3.1	In broad valley upslope from defined watercourse	Yes, slopes $\ge 3^{\circ}$	No	Yes, slopes < $3^{\circ}$	Yes, slopes ≥ $3^{\circ}$	3	1	3	From LiDar					
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar					
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1						
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk					
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2						
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	.014.	
4.0	Other Factors													
	Vegetation													
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk					
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk			
	Slide History													
4.3	Previous slides in locality Evidence of movement in peat (e.g. tension cracks, step	< 5km	> 5km	< 5km	On site	2	2	4	From Geological Si	urvey of Irela	nd			
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk					
	Land Use			0					Farmer and all also to a		11-			
4.5		None	None	Cutaway/Turbary	Machine Gut		I	I	From aerial priolog	rapny and sit	e waik			
4.6	Evisting roads in place	Solid Boad	Solid Boad		Electing Boad	1	1	1	No existing road. V	alue assume	d			
4.0	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assume	ed	u.			
4.7	Likelihood Bating	Autumn	opinig	Summer	Autumn	0	•							
							Total	49		Likeliho	od Score	Scale	1	
							Max Possible	72		0.0-0.3	Nealiaible	1		
										0.3-0.5	Low	2		
⊢							Likelihood	0.68		0.5-0.7	Medium	3		
⊢										0.7-1.0	High	4		
⊢														
					IMPAG	т								
5.0	Impact Factors													
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium (1.000 -	Potential for Bog burst	2	3	6						
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar					
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar					
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar					
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2						
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk					
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk					
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk					
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.					
	Impact Rating													
							Total	21	Impact Score Scale					
							Max Possible	33		0.0-0.3	Negligible	1		
L										0.3-0.5	Low	2		
1							Immont	0.04		0 5 0 7	Madium	2		





### Peat Stability Risk Assessment

Grousemount Wind Farm

 Location:
 Access Track 9:
 T4 Spur

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						<b>A</b> = = =	aa Traak Or T	4.0					
				Rating		Acce	SS TRACK 9: T	4 Spur	Comment				
No.	Likelihood/ Impact Factors	Value	1	2	3	Rating Value	Weighting	Score	Comment				
					LIKELIH	DOD							
1.0	Ground Conditions												
	Peat												
1.1	Peat Depth	<1m	<1m	>3m	1-3m	1	2	2	Based on peat prol	pes and site ir	nvestigation c	arried out by	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried ou	it by IGSL in 2	2015.		
	Subsoil Characteristics												
1.3	Subsoil Type	Sandy gravelly clay	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried ou	it by IGSL in 2	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	it by IGSL in 2	2015.		
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	335m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	E	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	>10°	<3°	>7°	3° - 7°	2	2	4	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ $3^{\circ}$	No	Yes, slopes $< 3^{\circ}$	Yes, slopes ≥ $3^{\circ}$	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	200 - 300m	> 300m	200 - 300m	< 200m	2	1	2	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on ave	erage rainfall f	from 1985 - 2	2014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site	e walk		
	Slide History												
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological S	urvey of Irelar	nd		
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use								-				
4.5		None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site	e walk		
	Other Factors	0 11 10 1	0						No ovietine so od N				
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Early	Floating Road	1	1	1	No existing road. V	alue assumed	1.		
4.7		Autumn	Spring	Summer	Autumn	3	1	3	worst case assum	ea.			
	Likelihood Rating						Tetel	44		1.010	d 0	Quala	1
							Total Max Dessible	44		Likelino	Negligible	Scale	
							Wax POSSIDIE	12		0.3-0.5	Low	2	
							l ikelihood	0.61		0.5-0.7	Medium	3	
							Likelillood	0.01		0.7-1.0	High	4	
										0.1 110	g.		
					IMPAC	т							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium (1.000	Potential for Bog	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	200-500m	>500m	200-500m	<200m	2	1	2	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and site	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site v	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on	site during co	onstruction.	
	Impact Rating											_	
							Total	20		Impact	Score	Scale	



Max Possible

33

0.0-0.3

0.3-0.5

Negligible

Low

1

2


Grousemount Wind Farm

 Location:
 Access Track 10: T4 Junction - T7 Junction

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

			-		A	ccess Track	10: T4 Juncti	on - T7 Juncti	unction				
No.	Likelihood/ Impact Factors	Value		Rating	•	Rating Value	Weighting	Score	Comment				
			1	2	3								
1.0	Ground Conditions						Γ		1				
1.0	Peat												
11	Peat Depth	1.2m	<1m	>3m	1-3m	3	2	6	Based on peat pro	bes and site i	investigation of	arried out by	IGSL in 2015.
1.1	Peat Condition in Trial Pits	Stands Well	Drv/ Stands well		Extremely Wet/	1	1	1	Trial pits carried or	it by IGSL in	2015	amou out by	1002 11 2010.
1.2	Subsoil Characteristics		Dry/ Otanus wen	Clowly Squeezing	Undiggable				ina pite camed ce		2010.		
1.3	Subsoil Type	Soft sandy	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial pits carried or	ut by IGSL in	2015.		
1.0	Peat fibres continuous across transition to subsoil	gravelly clay Partially	Glacial Till Yes	Partially	Clay	2	1	2	Trial pits carried ou	ut by IGSL in	2015.		
2.0	Topography			· an training				_		,			
	Situation												
2.1	Elevation OD [m]	340m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	E	SW. S. SE	W.E	NW. N. NE	2	1	2	From LiDar				
	Slope Angle		- , -, -	,									
2.3	Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3º - 7º	3	2	6	From LiDar				
	Geomorphology	0 210		~ ~	0 1	-							
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.				
4.0	Other Factors								From Met Éireann. Based on average rainfall from 1985 - 2014.				
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	graphy and sit	e walk		
	Slide History												
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and sit	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	/alue assume	d.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ied.			
	Likelihood Rating												
							Total	51		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.71		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
					IMPAG	СТ							
5.0	Impact Factors		Small volume	Medium	Potential for Bog								
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	graphy and sit	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	graphy and sit	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities or	n site during c	onstruction.	
	Impact Rating								lunnard Castra Saala				
<u> </u>							Total	21		Impac	t Score	Scale	
$\vdash$							Max Possible	33		0.0-0.3	Negligible	1	
⊢							<u> </u>	0.04		0.3-0.5	Low	2	





Grousemount Wind Farm

 Location:
 Access Track 11: T7 Spur

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

	I	1											
						Acces	s Track 11: T	7 Spur					
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment				
	1			-	LIKELIH	OOD							
1.0	Ground Conditions												
-	Peat												
1.1	Peat Depth	0.6m	<1m	>3m	1-3m	1	2	2	Based on peat prot	bes and site ir	vestigation c	arried out by	IGSL in 2015.
12	Peat Condition in Trial Pits	Stands Well	Drv/ Stands well	Slowly squeezing	Extremely Wet/	1	1	- 1	Trial pits carried ou	t by IGSL in 2	015.	,	
	Subsoil Characteristics		Bij/ Otando Hon	olomy oquoozing	Undiggable								
13		Soft - firm sandy	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial pits carried ou	t by IGSL in 2	015		
1.0	Peat fibres continuous across transition to subsoil	gravelly silt / rock	Glacial Till Yes	Partially	Clay	2	1	2	Trial pits carried ou	t by IGSL in 2	015		
2.0		T artially	103	1 ditidity	110	-		-	inal pilo dallod de				
2.0	Situation												
21		370m	<200m		>200m	3	1	3	From LiDar				
2.1	Slone Aspect	F	SW S SE	WE	NW N NE	2	1	2	From LiDar				
2.2		L	3W, 3, 3L	W, L	11000, IN, INE	2		-					
0.0	Slope Angle - Ground Surface	0° 10°			0° 7°	2	2	6	From LiDar				
2.3	Goomernhology	0" - >10"	<3	>/*	3' - 7'	3	2	0					
0.4		Dianar	Canadya	Planar	Canvay	2		2	From LiDor				
2.4		Flariar	Concave	Fiariar	Convex	2	1	2	From LiDar				
2.5		>100m	> 100m	50-100m	< 50M	I	1	1	FIOIII LIDAI				
3.0	Hydrology												
	Hydrology							-	E 1:0				
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m Springs/	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	4.				
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Eireann.	Based on ave	erage rainfall	rom 1985 - 2	2014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site	walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site	walk		
	Slide History												
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological S	urvey of Irelan	d		
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site	walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road	Minter / Early	Floating Road	1	1	1	No existing road. V	alue assumed	l.		
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assume	ed.			
	Likelihood Rating												7
							Total	47		Likelihoo	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.65		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
					IMPAC	т							
5.0	Impact Factors		Ome II										
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	Medium (1,000 -	Potential for Bog burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and site	walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawi	ngs and site v	valk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site	walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on	site during co	instruction.	
	Impact Rating												
							Total	21		Impact	Score	Scale	



Max Possible

33

0.0-0.3

0.3-0.5

Negligible

Low

1

2



Grousemount Wind Farm

 Location:
 Access Track 12: T7 Junction - T10 Junction

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

					A	cess Track 1	12: T7 Junctio	n - T10 Junct	Inction				
No	l ikelihood/ Impact Factors	Value		Rating		Bating Value	Weighting	Score	Comment				
		100	1	2	3			000.0					
					LIKELIH	OOD							
1.0	Ground Conditions								8				
	Peat								Decent on a set and	h			10.01 := 0045
1.1		1.8m	<1m	>3m	1-3m Extremely Wet/	3	2	6	Based on peat pro	bes and site	investigation c	carried out by	IGSL in 2015.
1.2		Slowly squeezing	Dry/ Stands well	Slowly squeezing	Undiggable	2	1	2	That pits carried of	ut by IGSL In	2015.		
-	Subsoil Characteristics	Soft sandy	Gravel/ Firm		Soft Sensitive				Trial site consideration	the loop in	0015		
1.3		gravelly clay / silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried of		2015.		
1.4		Partially	Yes	Partially	NO	2	1	2	That pits carried of	ut by IGSL In	2015.		
2.0	i opograpny												
0.4		000	000		000				From LiDer				
2.1		390m	<200m	W/ F	>200m	3	1	3	From LiDar				
2.2		IN	5W, 3, 3E	VV, E	INVV, IN, INE	3	1	3	FIOITEDai				
2.2	Slope Angle - Ground Surface	0° 40°	~	70	00 70	2	2	6	From LiDar				
2.3	Geomorphology	3' - >10'	<3	>/	3 - 7	5	2	0	I TOM LIDAI				
24	General slone characteristics downslone	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.4	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology	>100111	> 100111	30-10011	< 3011	1		,					
0.0	Hydrology												
3.1	In broad valley upslope from defined watercourse		No	Vac clanas x 2º	Vac. clanas > 2º	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4	Evidence of piping	No	No	-	Surface Water Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	From Met Éireann. Based on average rainfall from 1985 - 2014.				
3.6	Annual Rainfall	>1400 mm/vr	<1000 mm/yr	1000-1400 mm/vr	>1400 mm/vr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.				2014.
4.0	Other Factors			· • • • • • • • • • • • • • • • • • • •		-		-	From Met Éireann. Based on average rainfall from 1985 - 2014.				
	Vegetation												
4.1	Vegetation	Grasslands	Drv Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and sit	te walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	te walk		
	Slide History												
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and sit	te walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	/alue assume	ed.		
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assum	ied.			
	Likelihood Rating	Addimi		Gammer	Adtonin								
							Total	53		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.74		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
					IMPAG	т							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1,000 -	Potential for Bog burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	graphy and sit	te walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	graphy and sit	te walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracte	or facilities or	n site during c	onstruction.	
	Impact Rating												
							Total	21		Impac	t Score	Scale	
							Max Possible	33		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
1							Impact	0.64		0507	Modium	3	





Grousemount Wind Farm

 Location:
 Access Track 13: T10 Junction - T8

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Access Tr	ack 13: T10 J	unction - T8	T8					
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment					
	· · ·		1	2	3									
10	Occurred Occurrent				LIKELIN									
1.0	Breat													
1.1	Post Denth	0.9m	-1m	- 2m	1.2m	1	2	0	Based on peat pro	hes and site i	overtigation	carried out by	IGSL in 2015	
1.1	Peat Condition in Trial Pite	U.OIII Standa Wall	<1111 Dry/ Standa woll	Slowly squaazing	Extremely Wet/	1	2	2	Trial pits carried or	ut by IGSL in f	2015	carried out by	IGSL III 2015.	
1.2		Stanus wen	Dry/ Stanus well	Slowly squeezing	Undiggable			1	That pits carried of		2013.			
1.2		Soft sandy	Gravel/ Firm	Smooth Book	Soft Sensitive	2	1	2	Trial pits carried or	ut by IGSL in t	2015			
1.5	Peat fibres continuous across transition to subsoil	gravelly silty clay	Glacial Till	Partially	Clay	2	1	2	Trial pits carried of	ut by IGSL in t	2015			
2.0		1 artially	165	T artially	110	2	·	2	That pits carried of					
2.0	Situation													
21		400m	<200m		>200m	3	1	3	From LiDar					
2.1	Slope Aspect	NE	SW S SE	WE	NW N NE	3	1	3	From LiDar					
	Sione Angle		011, 0, 02		,			0						
23	Slope Angle - Ground Surface	0° - >10°	~3 <sup>0</sup>	> 7º	3° - 7°	3	2	6	From LiDar					
2.0	Geomorphology	0 - 210	<3	21	0-1		-	0						
2.4	General slope characteristics downslope	Convex	Concave	Planar	Convex	3	1	3	From LiDar					
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar					
3.0	Hydrology						· ·							
	Hydrology													
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar					
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar					
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1						
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk					
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2						
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.				2014.	
4.0	Other Factors								From Met Eireann. Based on average rainfall from 1985 - 2014.					
	Vegetation													
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and sit	e walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	graphy and sit	e walk			
	Slide History													
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	Survey of Irela	nd			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk					
	Land Use													
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and sit	e walk			
	Other Factors													
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. \	/alue assume	d.			
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ned.				
	Likelihood Rating													
							Total	47		Likeliho	od Score	Scale		
							Max Possible	72		0.0-0.3	Negligible	1		
										0.3-0.5	Low	2		
							Likelihood	0.65		0.5-0.7	Medium	3		
										0.7-1.0	High	4		
				1	IMPAG	СТ								
5.0	Impact Factors		Small volume	Modium	Potential for Par									
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 -	burst	2	3	6						
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar					
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar					
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar					
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2	ļ					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	graphy and sit	e walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	rings and site	walk			
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	graphy and sit	e walk			
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contract	or facilities on	site during c	onstruction.		
	Impact Rating											1	1	
⊢							Total	21		Impac	t Score	Scale		
$\vdash$							Max Possible	33		0.0-0.3	Negligible	1		
⊢							Impact			0.3-0.5	Low	2		





Grousemount Wind Farm

 Location:
 Access Track 14: T10 Junction - T9

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Access Tr	ack 14: T10 J	unction - T9					
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment				
	· ·		1	2									
10	Owners of Ormalities	1			LIKELIN								
1.0	Bret												
1 1	Peat Denth	1.5m	<1m	>3m	1-3m	3	2	6	Based on neat pro	bes and site i	ovestigation	arried out by	IGSL in 2015
1.1	Peat Condition in Trial Pite	Standa Woll	Standa woll	Slowly caugozing	Extremely Wet/	1	1	1	Trial pits carried or		2015	amed out by	100E III 2013.
1.2		Stanus weil	Dry/ Starius well	Slowly squeezing	Undiggable	1	1	1	That pits carried of		2013.		
13		Soft sandy	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial pits carried o	ut by IGSL in 3	2015		
1.3	Peat fibres continuous across transition to subsoil	gravelly silt / clay	Glacial Till	Partially	Clay	2	1	2	Trial pits carried of	ut by IGSL in 2	2015		
2.0		1 artially	165	T artially	110	2	·	2	That pits carried of				
2.0	Situation												
21		405m	<200m		>200m	3	1	3	From LiDar				
2.1	Slope Aspect	NW N NF	SW S SE	WF	NW N NE	3	1	3	From LiDar				
	Slope Angle	,	011, 0, 02		,			0					
2.3	Slope Angle - Ground Surface	3º - 7º	< 3°	>7°	3° - 7°	3	2	6	From LiDar				
	Geomorphology	<u> </u>	~0	~		-	-	-					
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m	< 200m	1	1	1	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	. Based on av	erage rainfall	from 1985 - 2	2014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and site	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	graphy and site	e walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	Survey of Irelar	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No		Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and site	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. \	Value assume	d.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ned.			
	Likelihood Rating									_			_
							Total	48		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
L							Likelihood	0.67		0.5-0.7	Medium	3	
L										0.7-1.0	High	4	
L													
					IMPA	CT							
5.0	Impact Factors		Small volume	Medium	Potential for Reg								
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	1	1	1	From LiDar				
5.3	Proximity to defined valley	200-500m	>500m	200-500m	<200m	2	1	2	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	1	1	1	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2			P		
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photoc	graphy and site	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	vings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	graphy and site	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contract	or tacilities on	site during co	onstruction.	
_	Impact Rating						-						1
⊢		<b> </b>					i otal	16		Impac	t Score	Scale	
┣—							wax Possible	33		0.0-0.3	ivegligible	1	
┣──							Impact	0.49		0.5-0.7	Medium	2	





Grousemount Wind Farm

 Location:
 Access Track 15: T9 Junction - T11 Junction

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

					A	ccess Track 1	15: T9 Junctio	on - T11 Junct	Junction				
No.	Likelihood/ Impact Factors	Value		Rating	-	Rating Value	Weighting	Score	Comment				
				2			1						
10	One word Open distance	1			LIKELIN				1				
1.0	Post												
1 1	Peat Depth	1.4m	<1m	⊳3m	1-3m	3	2	6	Based on peat pro	hes and site i	nvestigation c	arried out by	IGSL in 2015
1.1	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1		1	Trial pits carried or	it by IGSL in	2015	arried out by	
1.2		Stands Weil	Dry/ Stands weil	Slowly squeezing	Undiggable	1	I	1			2010.		
13	Subsoil Type	Sandy gravelly silt	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial nits carried or	it by IGSL in	2015		
1.0	Peat fibres continuous across transition to subsoil	Partially	Glacial Till Yes	Partially	Clay	2	1	2	Trial pits carried ou	ut by IGSL in	2015		
2.0	Topography	- artiary	100	i uruury		-		-					
	Situation												
2.1	Elevation OD [m]	400m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	NW	SW. S. SE	W.E	NW. N. NE	3	1	3	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	3° - 7°	<3°	>7°	3° - 7°	3	2	6	From LiDar				
	Geomorphology	-			-								
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	graphy and sit	e walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and sit	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road	Minter / Early	Floating Road	1	1	1	No existing road. V	/alue assume	d.		
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assum	ied.			
	Likelihood Rating									r			1
							Total	50		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
⊢							Likelihood	0.69		0.5-0.7	Medium	3	
⊢										0.7-1.0	High	4	
$\vdash$													
$\vdash$					IN TO A 1	о <b>т</b>							
	Impact Factors				IMPA								
5.0	Volume of peat in potential post flow	Madium	Small volume	Medium	Potential for Bog	0	0	0					
5.1		Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6	From LiDor				
5.2	Proximity to defined valley	<pre>valley </pre>	Sowi/ contained	200-500m	valley	3	1	3	From LiDar				
5.3	Valley profile	<200M	>DUUC<	Lou-South	<200M	3	1	3	From LiDar				
5.4	Downstream aquatic environment	Sensitivo	Non-sensitivo	Sensitivo	Drinking water	3 9	1	3 2					
5.5	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road		1		From aerial photos	ranhy and sit	e walk		
5.0	Overhead lines in potential peat flow path	No	Phone Lines	Electricity LV	Electricity MV HV	1	1	1	From service draw	ings and site	walk		
5.7	Buildings in potential peat flow path	No	No.	Farm out-bourses		1	1	1	From aerial photos	ranhy and site	e walk		
5.0	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contract	or facilities or	site during or	onstruction	
0.0	Impact Rating			1 40		·	· ·	·	and the second s		sine during be		
							Total	21	Impact Score Scale				
$\vdash$							Max Possible	33		0.0-0.3	Nealiaible	1	
⊢		1							1	0.3-0.5	Low	2	
$\vdash$		1					Impact	0.64		0.5-0.7	Medium	3	





**Grousemount Wind Farm** 

Location: Access Track 16: T11 Junction - Borrow Pit G 2015 Inspected on: Inspected by: ESBI / BLP Completed by: SS August 2015 Date:

3

ļ		1											
					Ac	cess Track 1	6: T11 Juncti	on - Borrow P	it G				
No.	Likelihood/ Impact Factors	Value		Rating	0	Rating Value	Weighting	Score	Comment				
		l	1	2									
10					LIKELIN		1						
1.0	Ground Conditions												
1.1	Peat Depth	1.1m	<1m	>3m	1-3m Extremely Wot/	3	2	6	Based on peat prol	bes and site	investigation c	arried out by	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Undiggable	1	1	1	Trial pits carried ou	ut by IGSL in	2015.		
	Subsoil Characteristics	Co# 1	Over 11 E		Coff Orac III								
1.3	Subsoil Type	Soft sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Sott Sensitive Clay	3	1	3	Trial pits carried ou	ut by IGSL in	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	ut by IGSL in	2015.		
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	440m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	SW	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar				
	Slope Angle	-	, . , ==	, .		1	1						
23	Slope Angle - Ground Surface	0° - 10°	-0 <sup>0</sup>	- 7 <sup>0</sup>	0 <sup>0</sup> 7 <sup>0</sup>	3	2	a	From LiDar				
2.3	Geomorphology	U ->1U	<0	>/	3 - 1	5	-	0					
<u> </u>		C'	0	8	<u> </u>				From LiDer				
2.4	deneral slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LIDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	⊢rom LiDar			_	
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes $\ge 3^{\circ}$	No	Yes, slopes < 3°	Yes, slopes $\ge 3^{\circ}$	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m	< 200m	1	1	1	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/vr	<1000 mm/vr	1000-1400 mm/vr	>1400 mm/vr	3	1	3	From Met Éireann	Based on av	verage rainfall	from 1985 - 2	014.
4.0	Other Factors	200 mm/yr	2.000 mm/yr		200 mm/yr								
4.0	Vigeototion												
				- · ·		-	. ·	-	Former and the state	una de la composición			
4.1	vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	⊢rom aerial photog -	raphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and si	te walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	te walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assume	ed.		
47	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assum	ed.			
/	Likelihood Rating	Autumn	Spring	Summer	Autumn	5							
							Tatal	40		1.0. 19	ad C	0!	
							i otal	46		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.64		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
					IMPAG	СТ							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
52	Downslope features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	Valley	3	1	3	From LiDar				
5.2	Provimity to defined valley	~ E00~	- E00m	watercourse	~2000m	4	4	4	From LiDar				
0.3 F 4				MUUC-UU2	<20011			· ·					
5.4		Steep	Hat	Intermediate	Steep Drinking water	3	1	3	From LIDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and si	te walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and si	te walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities or	n site during co	onstruction.	
	Impact Rating												
							Total	19		Impac	t Score	Scale	
							Max Possible	33		0.0-0.3	Negligible	1	
<u> </u>						<u> </u>			<u> </u>				





Grousemount Wind Farm

 Location:
 Access Track 17: Borrow Pit G - T13

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Access Tra	ick 17: Borro	w Pit G - T13	T13				
No	l ikelihood/ Impact Factors	Value		Rating		Bating Value	Weighting	Score	Comment				
140.		Value	1	2	3	nating value	weighting	50016	Comment				
					LIKELIH	OOD			-				
1.0	Ground Conditions								2				
	Peat												
1.1	Peat Depth	<1m	<1m	>3m	1-3m	1	2	2	Based on peat pro	bes and site i	nvestigation o	carried out by	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Undiggable	1	1	1	Trial pits carried ou	ut by IGSL in	2015.		
	Subsoil Characteristics	Oracial ( askiblas (	Output/ Firm		Ooth Oomoitius								
1.3	Subsoil Type	boulders	Glacial Till	Smooth Rock	Clay	1	1	1	Trial pits carried ou	ut by IGSL in	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	ut by IGSL in	2015.		
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	490m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	NW	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3º - 7º	2	2	4	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes $\ge 3^{\circ}$	No	Yes, slopes $< 3^{\circ}$	Yes, slopes ≥ $3^{\circ}$	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.				
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assume/	d.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ed.			
	Likelihood Rating												
							Total	42		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.58		0.5-0.7	Medium	3	
L										0.7-1.0	High	4	
					IMPAG	СТ							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1,000 -	Potential for Bog burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and sit	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and sit	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities or	site during c	onstruction.	
	Impact Rating												
							Total	21		Impac	t Score	Scale	
							Max Possible	33		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
1							Impact	0.64		0.5-0.7	Medium	3	





Grousemount Wind Farm

 Location:
 Access Track 18: T12 Spur

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

		1				-								
		Access Track 18: 112 Spur												
No.	Likelihood/ Impact Factors	Value		Rating	2	Rating Value	Weighting	Score	Comment					
				2				<b>I</b>	I					
10	Ground Conditions						1	r						
1.0	Deet													
									Deserved and a sector method				1001 := 0045	
1.1		<1m	<1m	>3m	1-3m Extremely Wet/	1	2	2	Based on peat prot	bes and site in	ivestigation ca	arried out by	IGSL IN 2015.	
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Undiggable	1	1	1	I rial pits carried ou	it by IGSL in 2	2015.			
	Subsoil Characteristics	Gravel / cobbles /	Gravel/ Firm		Soft Sensitive									
1.3	Subsoil Type	boulders	Glacial Till	Smooth Rock	Clay	1	1	1	Trial pits carried ou	it by IGSL in 2	2015.			
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	it by IGSL in 2	2015.			
2.0	Topography													
	Situation													
2.1	Elevation OD [m]	490m	<200m		>200m	3	1	3	From LiDar					
2.2	Slope Aspect	w	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar					
	Slope Angle													
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar					
	Geomorphology													
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar					
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar					
3.0	Hydrology													
5.5	Hydrology													
21	In broad valley upslope from defined watercourse	Von classes > 00	No	Voo class- of	Von classes of	2	1	3	From LiDar					
0.1	Distance from head of defined watercourse	res, siopes ≥ 3°	NU	res, slopes < 3°	res, siopes ≥ 3°	0	1	0	From LiDor					
3.2		< 200m	> 300m	200 - 300m	< 200m Springs/	3	1	3	From LIDar					
3.3		Localised	Localised	Ponded in drains	Surface Water	1	1	1						
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk					
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2						
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on ave	erage rainfall f	rom 1985 - 2	014.	
4.0	Other Factors													
	Vegetation													
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site	e walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site	e walk			
	Slide History													
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irelar	nd			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk					
	Land Use													
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site	e walk			
	Other Factors													
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assumed	d.			
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assume	ed.				
	Likelihood Rating	Autumn		Summer	Autumn									
							Total	41		Likeliho	od Score	Scale	[	
							Max Possible	72		0.0-0.3	Negligible	1		
								, _		0.3-0.5	Low	2		
							l ikelihood	0.57		0.5-0.7	Medium	2		
								0.01		0.7.1.0	Liel			
										0.7-1.0	nign			
						)T								
			1	[	IMPAC	1								
5.0	Impact Factors		Small volume	Medium	Potential for Bog									
5.1	volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6						
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar					
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar					
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar					
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2						
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and site	e walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawi	ings and site	walk			
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site	e walk			
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on	site during co	nstruction.		
	Impact Rating													
							Total	21	Impact Score Scale					
				1			Max Possible	33	1	0.0-0.3	Negligible	1	1	
		1		1			ł	ł		0.3-0.5	Low	2		





Grousemount Wind Farm

 Location:
 Access Track 19: T14 Spur

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Acces	s Track 19: T	14 Spur					
				Rating				- Copul					
No.	Likelihood/ Impact Factors	Value	1	2	3	Rating Value	Weighting	Score	Comment				
					LIKELIH	OOD							
1.0	Ground Conditions												
	Peat												
1.1	Peat Depth	<1m	<1m	>3m	1-3m	1	2	2	Based on peat prot	pes and site ir	vestigation ca	arried out by	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried ou	it by IGSL in 2	015.		
	Subsoil Characteristics												
1.3	Subsoil Type	Soft to firm sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive	3	1	3	Trial pits carried ou	it by IGSL in 2	015.		
1.4	Peat fibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried ou	t by IGSL in 2	015.		
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	490m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	w	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
5.5	Hydrology												
31	In broad valley upslope from defined watercourse	Yes cloner > 20	No	Yes clones - 20	Yes cloner > 20	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	<pre>1 co, siupes ≤ 3 &lt; 200m</pre>	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1	i ioni Libai				
3.0		No	No	i onded in drains	Surface Water	1	1	1	From site walk				
2.5	Evidence of piping	Variad	Down clopo	Variad / Obligue	Aaroog glopp	2	1	2					
3.5	Annual Bainfall	× 1400 mm/vr	<1000 mm/ur	1000 1400 mm/ur	> 1400 mm/ur	2	1	2	From Met Éireann	Based on ave	arage rainfall f	rom 1985 - 2	014
3.0	Other Easters	>1400 mm/yi	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	'	3	Tion wet Liteann.	Dased on ave	age rainair	10111 1303 - 2	014.
4.0	Vesetation												
4.1	Vegetation	Crasslanda	Drulleether	Creaslanda	Watanda				From porial photog	raphy and aits	wolk		
4.1		Grassianus	Dry Heather	Grassianus	Student Crewth	2	15	2	From aerial photog	raphy and site	walk		
4.2		IN/A	GOOD GIOWIN	Fair	Stunted Growth	U	1.5	U	From aeriai priolog	rapity and site	Wain		
4.0	Silde History	5 luna	<b>F</b> luer	El	Or site				From Coological St		a		
4.3	Evidence of movement in peat (e.g. tension cracks, step	> 5KM	> 5KM	< 9KM	On site	1	2	2	From site welk	urvey or irelar	lu		
4.4	features, compression features)	INO	INO	-	Yes		1	1	FIOITI SILE WAIK				
4.5	Land Use	Nees	News	O the second second	Mashina Out				From oprial photog	ranky and aits	walk		
4.5		INORE	INORE	Cutaway/Turbary	Machine Cut	I	1	1	From aeriai priolog	rapny and site	Walk		
	Other Factors										4		
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Early	Late Summer/	1	1	1	No existing road. V	alue assumed	1.		
4.7		Autumn	Spring	Summer	Autumn	3	1	3	worst case assume	ed.	_	_	
	Likelihood Rating						<b>_</b>			· · · · ···		<u> </u>	
							i otal	42		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.58		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
					IMPAC	T							
5.0	Impact Factors		Small volume	Medium	Potential for Bog								
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and site	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawi	ings and site v	valk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on	site during co	nstruction.	
	Impact Rating												
							Total	21		Impact	Score	Scale	
							Max Possible	33		0.0-0.3	Negligible	1	
				I						0.3-0.5	Low	2	





Grousemount Wind Farm

 Location:
 Access Track 20: Borrow Pit G - T15 Spur Ch. 900

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

					Acce	ess Track 20:	Borrow Pit G	- T15 Spur C	ur Ch. 900				
No.	Likelihood/ Impact Factors	Value		Rating	2	Rating Value	Weighting	Score	Comment				
				2									
1.0	Ground Conditions	I			Enceent								
1.0	Peat												
11	Peat Deoth	0.8m	<1m	>3m	1-3m	1	2	2	Based on peat pro	bes and site	investigation of	carried out by	IGSL in 2015.
1.1	Peat Condition in Trial Pits	Slowly squeezing	Drv/ Stands well		Extremely Wet/	2	1	2	Trial pits carried or	it by IGSL in	2015	samoa oar sy	
	Subsoil Characteristics	cioniy oqueezing	Bry/ orando from	cierty equeezing	Undiggable	-		-	· · · · · · · · · · · · · · · · · · ·				
1.3	Subsoil Type	Sandy gravelly silt	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial pits carried ou	it by IGSL in	2015.		
1.0	Peat fibres continuous across transition to subsoil	Yes	Glacial Till Yes	Partially	Clay No	1	1	1	Trial pits carried ou	It by IGSL in	2015.		
2.0	Topography		100	i uruury									
	Situation												
2.1	Elevation OD [m]	470m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	W. NW	SW. S. SE	W.E	NW. N. NE	3	1	3	From LiDar				
	Slope Angle	,		, _	,	-		-					
2.3	Slope Angle - Ground Surface	>7°	< 3°	>7°	3° - 7°	2	2	4	From LiDar				
	Geomorphology	~1	~~	21	<u> </u>	-							
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Ves slopes > 3º	No	Ves slopes < 3°	Vec. clopes > 3º	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1	i ioni Libu				
3.4		No	No	-	Surface Water	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique		2	1	2					
3.6	Annual Bainfall	>1400 mm/vr	<1000 mm/vr	1000-1400 mm/yr	>1400 mm/vr	3	1	3	From Met Éireann	Based on av	verage rainfall	from 1985 - 2	2014
4.0	Other Factors	211001111091			2 1 100 milli ji	<u> </u>							
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photoo	raphy and sit	te walk		
42	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	le walk		
	Slide History					-		-					
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvev of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step	No	No	-	Yes	1	- 1	1	From site walk				
	teatures, compression features)		110										
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photod	raphy and sit	te walk		
	Other Factors	Hono	Nono	outanaj, raibarj	indonino odi				· · • · · • · • · • · • • • • • • •				
4.6	Existing roads in place	Solid Boad	Solid Boad		Floating Boad	1	1	1	No existing road. V	/alue assume	ed.		
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assum	ed.			
	Likelihood Rating	Autumn	-1- 3	Summer	Autumn								
							Total	44		Likeliho	od Score	Scale	1
							Max Possible	72		0.0-0.3	Negligible	1	
							1			0.3-0.5	Low	2	
							Likelihood	0.61		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
											3		
┢──	I	1		1	1	1	1	1	1				
					IMPA	СТ							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
5.2	Downslope features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	Minor undefined	burst Vallev	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steen	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	1	1	1	From aerial photon	iraphy and sit	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity I V	Electricity MV UV	1	1	1	From service draw	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photon	Iraphy and eit	e walk		
5.0	Capability to respond (access and recourses)	Good	Good	Fair	Poor	1	1	1	Based on contract	or facilities or	n site during o	onstruction	
5.5	Impact Rating	0000	GUUd	1 011	1 001						. s.c during 0		
	inpact rating						Total	21		Impo	t Score	Scalo	1
┣─		<u> </u>				-	Max Possible	22	}	0.0-0.3	Negligible	1	}
┣—							Max PUSSIDIE	33		0.0-0.3			l
┣—				}			l			0.3-0.5	Low	2	





Grousemount Wind Farm

 Location:
 Access Track 21 : T15 Spur Ch. 900 - T15

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Access Track	c 21 : T15 Spu	r Ch. 900 - T1	) - T15					
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment					
		, value	1	2	3			000.0						
					LIKELIH	OOD	-		-					
1.0	Ground Conditions													
	Peat													
1.1	Peat Depth	1.3m	<1m	>3m	1-3m Extremely Wet/	3	2	6	Based on peat pro	bes and site	investigation c	carried out by	IGSL in 2015.	
1.2	Peat Condition in Trial Pits	Slowly squeezing	Dry/ Stands well	Slowly squeezing	Undiggable	2	1	2	Trial pits carried ou	ut by IGSL in	2015.			
	Subsoil Characteristics		Graval/ Eirm		Soft Sonsitivo									
1.3	Subsoil Type	Sandy gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried ou	ut by IGSL in	2015.			
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	ut by IGSL in	2015.			
2.0	Topography								~					
	Situation													
2.1	Elevation OD [m]	480m	<200m		>200m	3	1	3	From LiDar					
2.2	Slope Aspect	NW	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar					
	Slope Angle													
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar					
	Geomorphology													
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar					
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar					
3.0	Hydrology								2					
	Hydrology						L							
3.1	In broad valley upslope from defined watercourse	Yes, slopes $\ge 3^{\circ}$	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar					
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar					
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1						
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk					
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	From Met Éireann. Based on average rainfall from 1985 - 2014.					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.					
4.0	Other Factors													
	Vegetation													
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and si	e walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and si	e walk			
	Slide History													
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd			
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk					
	Land Use													
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	e walk			
	Other Factors													
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Early	Floating Road	1	1	1	No existing road. V	alue assume	d.			
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assum	ed.				
	Likelihood Rating									r		r	-	
							Total	49		Likeliho	od Score	Scale		
							Max Possible	72		0.0-0.3	Negligible	1		
⊢										0.3-0.5	Low	2		
L							Likelihood	0.68		0.5-0.7	Medium	3		
⊢										0.7-1.0	High	4		
⊢														
						~~								
_	I				IMPA									
5.0	Impact Factors		Small volume	Medium	Potential for Bog	-	-	-						
5.1	volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6	From L'D					
5.2	Downslope teatures	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar					
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar					
5.4	valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	⊢rom LiDar					
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2			~			
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and sit	e walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site	walk			
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and si	e walk			
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.					
	Impact Rating									1		I Contraction	1	
<u> </u>							Total	21		Impac	t Score	Scale		
<u> </u>							Max Possible	33		0.0-0.3	Negligible	1		
									<b> </b>	0.3-0.5	Low	2		





Grousemount Wind Farm

 Location:
 Access Track 22: T11 Junction - Borrow Pit F

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

		-											-
					Ac	cess Track 2	2: T11 Junction	on - Borrow P	'it F				
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment				
			1	2									
10	Cround Conditions				LIKELIN								
1.0	Broth												
	Peat	0.0	4	0	4.0			â	Deced on post prol	haa and aita i	nunation of	arriad aut bu	
1.1	Peat Deptil	0.9m	<1m	>3m	Extremely Wet/	1	2	2	Based on peat pro	the look is a	nvestigation c	arried out by	IGSL III 2015.
1.2		Slowly squeezing	Dry/ Stands well	Slowly squeezing	Undiggable	2	1	2	I rial pits carried ou	It by IGSL IN 2	2015.		
	Subsoil Characteristics		Gravel/ Firm		Soft Sensitive								
1.3		Sandy gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried ou	It by IGSL in 2	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	I rial pits carried ou	it by IGSL in 2	2015.		
2.0	Topography												
	Situation	-					-						
2.1	Elevation OD [m]	400m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	W	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes $\ge 3^{\circ}$	No	Yes, slopes < $3^{\circ}$	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	2014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site	e walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irelar	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assume	d.		
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early Summer	Late Summer/	3	1	3	Worst case assum	ed.			
	Likelihood Rating	, atomini		Gummer	, locariti								
							Total	44		Likeliho	od Score	Scale	1
							Max Possible	72		0.0-0.3	Negligible	1	1
		1	1	1			ł	1	1	0.3-0.5	Low	2	1
							Likelihood	0.61		0.5-0.7	Medium	3	
		1	1	1			ł			0.7-1.0	High	4	
	1		1	1	1			1	1				
					IMPAC	СТ							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
5.2	Downslope features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	Minor undefined	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	- 1	1	1	From aerial photog	raphy and site	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity LV	Electricity MV LV	1	1	1	From service draw	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No.	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and eit	e walk		
5.0	Canability to respond (access and recourses)	Good	Good	Fair	Poor	1	1	1	Based on contracts	or facilities on	site during or	Instruction	
3.9	Impact Rating	000	000	1 411	1 001			1			and during CC		
	inspace rating						Total	21		Imnes	t Score	Scala	1
							- i Viai			- unnac	JUDIE	Juale	



Max Possible

33

0.0-0.3

0.3-0.5

Negligible

Low

1

2



Grousemount Wind Farm

 Location:
 Access Track 23: Borrow Pit F - River Roughty

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

					Ace	cess Track 2	3: Borrow Pit	F - River Rou	loughty				
No	l ikelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment				
		, and a second sec	1	2	3			000.0					
					LIKELIH	OOD							
1.0	Ground Conditions												
	Peat												
1.1	Peat Depth	1.3m	<1m	>3m	1-3m Extremely Wet/	3	2	6	Based on peat prot	bes and site i	nvestigation c	arried out by	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Slowly squeezing	Dry/ Stands well	Slowly squeezing	Undiggable	2	1	2	Trial pits carried ou	it by IGSL in 2	2015.		
	Subsoil Characteristics		Gravel/ Firm		Soft Sensitive								
1.3	Subsoil Type	Sandy gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried ou	t by IGSL in :	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	t by IGSL in :	2015.		
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	330m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	N	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Convex	Concave	Planar	Convex	3	1	3	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
L	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ $3^{\circ}$	No	Yes, slopes < $3^{\circ}$	Yes, slopes $\ge 3^{\circ}$	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assume	d.		
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early Summer	Late Summer/	3	1	3	Worst case assume	ed.			
	Likelihood Rating	/ lotoinin		Camillo	, laternin								
							Total	52		Likeliho	od Score	Scale	
F							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.72		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
				•		•	-						
					IMPAG	СТ							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
5.2	Downslope features	Valley	(<1.000m <sup>°</sup> ) Bowl/ contained	Minor undefined	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	1	1	1	From aerial photog	raphy and sit	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity I V	Electricity MV HV	1	1	1	From service drawi	ngs and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk				
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on	site during of	onstruction	
0.0	Impact Rating		0.000								g oc		
							Total	21	Impact Score Scole				
⊢							Max Possible	33		0.0-0.3	Negligible	1	
┣──										0.3-0.5	Low		







Grousemount Wind Farm

 Location:
 Access Track 25: T16 - T18

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Acces	s Track 25. T	: T16 - T18					
No	Likelihood/Impact Easters	Value		Rating		Poting V-lu-	Wainktin	- Coor-	Comment				
NO.	Likelinood/ impact Factors	value	1	2	3	Rating value	weighting	Score	Comment				
					LIKELIH		1						
1.0	Ground Conditions												
	Peat	4.0	4	0	4.0	0			Deced on post are	haa and site i	nuestigation o	arriad aut by	
1.1	Peat Condition in Trial Pite	L3m	<im< td=""><td>&gt;3m</td><td>Extremely Wet/</td><td>3</td><td>2</td><td>6</td><td>Trial pite carried or</td><td>it by ICSL in f</td><td>nvestigation c</td><td>arried out by</td><td>IGSL III 2015.</td></im<>	>3m	Extremely Wet/	3	2	6	Trial pite carried or	it by ICSL in f	nvestigation c	arried out by	IGSL III 2015.
1.2		Slowly squeezing	Dry/ Stands well	Slowly squeezing	Undiggable	2	1	2	Thai pits carried of		2015.		
13		Sandy gravelly silt	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial nits carried or	it by IGSL in t	2015		
1.5	Peat fibres continuous across transition to subsoil	/ silty gravel Partially	Glacial Till Ves	Partially	Clay	2	1	2	Trial pits carried or	ut by IGSL in :	2015		
2.0		T artitally	165	T arbany	110				ina pito camou ot		2010.		
	Situation												
2.1	Elevation OD [m]	420m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3º - 7º	2	2	4	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ $3^{\circ}$	No	Yes, slopes < $3^{\circ}$	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	2014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	grapny and sit	e walk		
4.0	Silde History	<b>F</b> lue	<b>F</b> lue	Flue	On site				From Coological C		ad		
4.3	Evidence of movement in peat (e.g. tension cracks, step	> 5Km	> 5KM	< 5KM	Un site	1	2	2	From cito wolk	urvey or Irela	nu		
4.4	features, compression features)	INU	INU	-	res	1		I	FIOITI SILE WAIK				
45	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photoc	raphy and sit	e walk		
4.0	Other Factors	None	None	Gulaway, Furbary	Machine Out				r rom donai priotog	japiny and on	o nun		
4.6	Existing roads in place	Solid Road	Solid Road		Floating Boad	1	1	1	No existing road. V	/alue assume	d.		
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assum	ied.			
	Likelihood Rating	Autumn		Summer	Autumn								
							Total	47		Likeliho	od Score	Scale	1
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.65		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
					IMPAG	СТ							
5.0	Impact Factors		Conc II?		Deteri' 17 -								
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	Medium (1.000 -	Potential for Bog burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	graphy and sit	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	graphy and sit	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contract	or facilities on	site during co	onstruction.	
	Impact Rating									· ·			1
							Total	21		Impac	t Score	Scale	
							Max Possible	33		0.0-0.3	Negligible	1	





Grousemount Wind Farm

 Location:
 Access Track 26: T16 - T17

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

		1											
			1			Acces	s Track 26: T	16 - T17	•				
No.	Likelihood/ Impact Factors	Value		Rating	2	Rating Value	Weighting	Score	Comment				
				2		000							
1.0	Ground Conditions	<b>I</b>					1	<b></b>	<b>I</b>				
1.0	Poet												
		4.0	4.00	0	1.0			-	Deced on post prof	and oite it	vention of	arriad aut but	
1.1		I.3m	<1m	>3m	Extremely Wet/	3	2	6	Based on peat pro	the loop in the	ivestigation ca	arried out by	IGSL III 2015.
1.2		Slowly squeezing	Dry/ Stands well	Slowly squeezing	Undiggable	2	1	2	i nai pits carried ou	It by IGSL In 2	2015.		
	Subsoil Characteristics	-	Gravel/ Firm		Soft Sensitive								
1.3	Subsoil Type	Sandy gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried ou	it by IGSL in 2	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	it by IGSL in 2	2015.		
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	460m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4	Evidence of piping	No	No	-	Surface Water Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique		2	1	2					
3.6	Annual Bainfall	>1400 mm/vr	<1000 mm/vr	1000-1400 mm/vr	>1400 mm//r	3	1	2	From Met Éireann	Based on av	arage rainfall f	rom 1985 - 2	014
1.0	Other Eastern	>1400 mm/yr		1000-1400 mm/yr	>1400 mm/yi	5		3		Dased on ave	stage taimain	101111000 2	
4.0													
									From aerial obotography and site walk				
4.1		Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk				
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	rapny and site	e walk		
	Slide History	-											
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irelar	nd		
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assume	d.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ed.			
	Likelihood Rating												
							Total	49		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.68		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
													-
	-	-	-				-	-	-				
					IMPAC	ст							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steen	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	1	1	1	From aerial photog	raphy and site	walk		
5.0	Overhead lines in potential peat flow path	No	Phone Lines	Electricity LV	Electricity MV 111	1		1	From service draw	ings and site	valk		
э./ г.с	Puildings in potential part flow path	INO N-	FIIORE LINES	Electricity, LV	Durally MV, HV			· ·	From coriol - bot	raphy and SILE	wain		
5.8			INO	rann out-nouses	Dweiling				Peeed	apiny and site		natur-ti-	
5.9	capability to respond (access and resources)	Good	Good	⊦aır	Poor	1	1	1	□ased on contractor	or racilities on	site during co	nstruction.	
	Impact Rating										- '		
							Total	21		Impac	Score	Scale	
<u> </u>							Max Possible	33		0.0-0.3	Negligible	1	
		•						•	•	0.0.0.5		0	





Grousemount Wind Farm

 Location:
 Access Track 27: T17 - Ch. 1850 (including T19 Spur)

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

					Acces	s Track 27: T	17 - Ch. 1850	(including T1	9 Spur)				
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment				
	1			2									
		r		[	LIKELIH				r				
1.0	Ground Conditions												
	Peat												
1.1	Peat Depth	1.5m	<1m	>3m	1-3m	3	2	6	Based on peat pro	bes and site	investigation c	arried out by	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Slowly squeezing	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	2	1	2	Trial pits carried ou	ut by IGSL in	2015.		
	Subsoil Characteristics												
1.3	Subsoil Type	Sandy gravelly silt	Gravel/ Firm	Smooth Rock	Soft Sensitive	3	1	3	Trial pits carried ou	ut by IGSL in	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	ut by IGSL in	2015.		
2.0	Topography												
	Situation												
2.1		400m	-200m		× 200m	2	1	2	From LiDar				
2.1	Slana Aspest	43011		)W/ F		3	1	3	From LiDar				
2.2		E	3W, 3, 3E	VV, E	INVV, IN, INE	2	1	2	FIOITEIDai				
	Slope Angle												
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes $\ge 3^{\circ}$	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m	< 200m	1	1	1	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	014.
4.0	Other Factors												
	Vegetation												
41	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk				
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photon	raphy and sit	e walk		
	Slide History					-		-		, ., ,			
43	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd		
4.0	Evidence of movement in peat (e.g. tension cracks, step	No	No	< old	Vac	1	1	1	From site walk				
4.4	features, compression features)	110	110		105	•							
4.5	Poot Workings	None	Nana	Cutowey/Turbery	Maabina Cut	1	1	1	From porial photog	raphy and air	o wolk		
4.5	Other Eastern	None	None	Gulaway/Turbary	Machine Gut	1	1	1	i tom aenai photog	graphy and sh	e wait		
10		Out int Durant	Onlid David		Flastine Daad				No oviating road )		a		
4.6		Late Summer/	Solid Road	Winter / Early	Late Summer/	1		1	No existing road. V	alue assume	u.		
4.7		Autumn	Spring	Summer	Autumn	3	1	3	Worst case assum	ieu.			
	Likelihood Rating									Т		1	[
							Total	46		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
		ļ					ļ			0.3-0.5	Low	2	
							Likelihood	0.64		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
					IMPAG	СТ							
5.0	Impact Factors		Smc <sup>II</sup> ·····		Deteri' 17 -								
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	Medium (1.000 -	Potential for Bog burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	>500m	>500m	200-500m	<200m	1	1	1	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk				
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk				
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk				
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.				
F	Impact Rating												
							Total	19		Impac	t Score	Scale	
<b>—</b>							Max Possible	33		0.0-0.3	Nealiaible	1	
⊢										0.3-0.5	Low	. 2	
┣──		<u> </u>					Impost	0.58	<u> </u>	0507	Modium	2	





Grousemount Wind Farm

 Location:
 Access Track 28: Ch. 1850 - Ch. 1400

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Access Tra	ck 28: Ch. 18	50 - Ch. 1400	. 1400				
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment				
			1	2									
1.0	Cround Conditions												
1.0	Poot												
11	Peat Denth	0.6m	<1m	_3m	1-3m	1	2	2	Based on peat pro	hes and site i	nvestigation c	arried out by	IGSL in 2015
1.1	Peat Condition in Trial Pits	Slowly squeezing	Dry/ Stands well		Extremely Wet/	2	1	2	Trial nits carried ou	it by IGSL in	2015	amea out by	
1.2	Subsoil Characteristics	Slowly squeezing	Dry/ Stands weil	Slowly squeezing	Undiggable	2	!	2	That pilo camed of		2010.		
13		Sandy gravelly silt	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	2	Trial nits carried or	it by IGSL in	2015		
1.0	Peat fibres continuous across transition to subsoil	Partially	Glacial Till Yes	Partially	Clay	2	1	2	Trial pits carried ou	it by IGSL in	2015		
2.0		1 di ildily	105	T difficulty	110		•	L	ina pio camba co		2010.		
	Situation												
21	Elevation QD [m]	530m	<200m		>200m	3	1	3	From LiDar				
22	Slope Aspect	F	SW S SE	WF	NW N NF	2	1	2	From LiDar				
	Slope Angle		011, 0, 02		,	-		-					
2.3	Slope Angle - Ground Surface	3° - >10°	< 3°	>7º	3º - 7º	3	2	6	From LiDar				
2.0	Geomorphology	0 - 210	<3	21	0-1		-	5					
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes > 20	No	Yes, slones - 20	Yes, slones > 30	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4	Evidence of piping	No	No	-	Surface Water Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/vr	1000-1400 mm/yr	>1400 mm/vr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	
4.0	Other Factors			·····,		-		-					•
	Vegetation												
4.1	Vegetation	Grasslands	Drv Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step	No	No		Yes	1	1	1	From site walk	-			
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	/alue assume	d.		
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assum	ed.			
	Likelihood Rating	Autumn		Summer	Autumn								
							Total	46		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
┢							Likelihood	0.64		0.5-0.7	Medium	3	
<u> </u>										0.7-1.0	High	4	
					IMPAG	ст							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2	1				
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and sit	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and sit	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities or	site during co	onstruction.	
	Impact Rating										-		
							Total	21		Impac	t Score	Scale	
$\vdash$							Max Possible	33		0.0-0.3	Negligible	1	
$\vdash$										0.3-0.5	Low	2	
<b>├</b> ─		<u> </u>					Impact	0.64		0.5-0.7	Medium	3	





Grousemount Wind Farm

 Location:
 Access Track 29: Ch. 1400 - Borrow Pit E

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Access Track	c 29: Ch. 1400	- Borrow Pit	Pit E				
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment				
	· · ·		1	2									
10	Oursend Ours distance				LIKELIN		1		1				
1.0	Ground Conditions												
1.1	Peat Depth	1.0m	.1m	- 2m	1.2m	2	2	e	Based on peat pro	hes and site	investigation	carried out by	IGSI in 2015
1.1		Light	<1111	>3III	Extremely Wet/	3	2	0	Trial pite optried of	it by ICSL in	2015	carried out by	IG3L III 2013.
1.2		Starius weil	Dry/ Stands wen	Slowly squeezing	Undiggable		l	1	That pits carried of		2013.		
1.2		Sandy grouply silt	Gravel/ Firm	Smooth Book	Soft Sensitive	2	1	2	Trial pits carried or	it by IGSL in	2015		
1.3	Post fibres continuous across transition to subsoil	Voc	Glacial Till	Bortiolly	Clay	1	1	1	Trial pits carried of		2015.		
2.0		Tes	Tes	Failidily	INU	1	· ·	1	That pits carried of		2013.		
2.0	Situation												
2.1		540m	-200m		- 200m	2	1	2	From LiDar				
2.1	Slove Aspert	N	SW S SE	WE	NW N NE	3	1	3	From LiDar				
2.2	Slope Angle	i v	5W, 5, 5L	vv, ∟	1477, 14, 14L	5	'	J					
23	Slope Angle - Ground Surface	0° > 10°	.0 <sup>0</sup>	× 7 <sup>0</sup>	2 <sup>0</sup> 7 <sup>0</sup>	3	2	6	From LiDar				
2.0	Geomorphology	0 - >10	<3	>/	3 - 7	5	2	0	i ioni Eibai				
24	General slope characteristics downslope	Convex	Concave	Planar	Convex	3	1	3	From LiDar				
2.4	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology	210011	2 100/11		< 00m		· ·						
0.0	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes clones > 20	No	Yes elones - 20	Yes clones > 20	3	1	3	From LiDar				
3.1	Distance from head of defined watercourse	res, slopes 2 3	> 300m	200 - 300m	res, slopes 2 3	3	1	3	From LiDar				
3.2	Surface water			Ponded in drains	Springs/	1	1	1	I TOITI LIDAI				
3.3		No	No	Fonded in drains	Surface Water	1	1	1	From site walk				
2.5	Evidence of piping	Variad		- Variad / Obligua	Across clops	2	1	2	Tiom site waik				
3.5	Annual Bainfall	× 1400 mm/ur	<1000 mm/ur	1000 1400 mm/ur	> 1400 mm/ur	2	1	2	From Met Éireann	Based on av	verage rainfall	from 1985 - 2	014
3.0	Other Eactors	>1400 mm/yr	<100011111/yi	1000-1400 mm/yr	>1400 mm/yi	3		3	Trom wet Eireann.	Dased on av	erage raimai	1101111303 - 2	.014.
4.0	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photon	ranhy and sit	e walk		
4.1	Forestry (if applicable)	N/A	Good Growth	Eair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk		
4.2	Slide History	IN/A		i ali	Stanted Growth	0	1.5	0	r toin achai photog	napity and si			
43	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	unvey of Irela	nd		
4.5	Evidence of movement in peat (e.g. tension cracks, step	> SKIII	> SKIII	< JKIII	Van	1	1	1	From site walk	divey of field	ild		
4.4	features, compression features)	110	140	-	165	1	'	1	Tion site wait				
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photon	ranhy and sit	e walk		
4.5	Other Eactors	None	None	Gulaway/Turbary	Machine Out	1	'	1	r toin achai photog	napity and si			
4.6		Solid Boad	Solid Boad		Eloating Boad	1	1	1	No existing road. V	alue assume	h		
4.0	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assum	ed			
4.7	Likelihood Bating	Autumn	opinig	Summer	Autumn		· ·						
							Total	50		Likeliho	od Score	Scale	1
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
<u> </u>							Likelihood	0.69	1	0.5-0.7	Medium	3	
<u> </u>									1	0.7-1.0	High	4	
<u> </u>							1		1				
		1	1	1	1	1	1	1	1				
					IMPAG	СТ							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
5.2	Downslope features	Vallev	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	burst Vallev	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Boad	- 1	1	- 1	From aerial photon	raphy and sit	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity I V	Electricity MV HV	1	1	1	From service draw	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photon	Iraphy and sit	te walk		
5.0	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities or	n site during o	onstruction	
5.5	Impact Bating		0000						and a second det		site dating o		
<u> </u>							Total	21		Imner	t Score	Scale	
<u> </u>							Max Possible	23		0.0-0.3	Nealiaible	1	
<u> </u>							Since 1 Obsibile			0.3-0.5		2	
								0.01		0.5-0.5	Low	2	





#### Peat Stability Risk Assessment Grousemount Wind Farm

 Location:
 Access Track 30: Borrow Pit E - Main Spine Road Parts 3 & 4 Interse

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

				Acc	ess Track 30	: Borrow Pit	E - Main Spin	e Road Parts	arts 3 & 4 Intersection					
No.	Likelihood/ Impact Factors	Value		Rating	•	Rating Value	Weighting	Score	Comment					
			1	2										
10	Ground Conditions								<b>I</b>					
	Peat													
1.1	Peat Depth	1.9m	<1m	>3m	1-3m	3	2	6	Based on peat prot	bes and site i	nvestigation c	arried out by	IGSL in 2015.	
1.2	Peat Condition in Trial Pits	Slowly squeezing	Drv/ Stands well	Slowly squeezing	Extremely Wet/	2	1	2	Trial pits carried ou	It by IGSL in	2015.	,		
	Subsoil Characteristics		,	,	Undiggable									
1.3	Subsoil Type	Sandy gravelly silt	Gravel/ Firm	Smooth Rock	Soft Sensitive	3	1	3	Trial pits carried ou	It by IGSL in	2015.			
1.4	Peat fibres continuous across transition to subsoil	Partially	Glacial Till Yes	Partially	No	2	1	2	Trial pits carried ou	It by IGSL in	2015.			
2.0	Topography	,		,						-				
	Situation													
2.1	Elevation OD [m]	480m	<200m		>200m	3	1	3	From LiDar					
2.2	Slope Aspect	NE	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar					
	Slope Angle													
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar					
	Geomorphology													
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar					
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar					
3.0	Hydrology													
	Hydrology													
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar					
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar					
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1						
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk					
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2						
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.					
4.0	Other Factors													
	Vegetation													
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and sit	e walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk			
	Slide History													
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk					
	Land Use													
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	e walk			
	Other Factors													
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Fork	Floating Road	1	1	1	No existing road. V	alue assume	d.			
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assume	ed.				
	Likelihood Rating									1		-	1	
							Total	51		Likeliho	od Score	Scale		
							Max Possible	72		0.0-0.3	Negligible	1		
⊢										0.3-0.5	Low	2		
┣—							Likelihood	0.71		0.5-0.7	Medium	3		
┣—										0.7-1.0	High	4		
						די								
5.0	Impact Factors				IMPAC									
5.0	Volume of next in notential next flow	Modium	Small volume	Medium	Potential for Bog	0	0	6						
5.1		Vallov	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	0	From LiDar					
5.2	Proximity to defined valley	valley	~500m	200-500m	<200m	3	1	3	From LiDar					
5.3		<200111 Stoop	South	200-500m	<200III Stoop	2	1	2	From LiDar					
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	3 9	1	2						
5.5	Public roads in notential peat flow path	No	No	Local Road	Supply Regional Poor	- 1	1	<u>د</u> ۱	From aerial photog	raphy and cit	e walk			
5.0	Overhead lines in potential peat flow path	No	Phone Linco	Electricity LV	Electricity MV LW	1	1	1	From service drawi	ings and site	walk			
5.7	Buildings in potential peat flow path	No	No	Electricity, LV	Dwelling	1	1	1	From aerial photog	ingo and sile	e walk			
5.0	Capability to respond (access and recourses)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities or	site during or	Instruction		
3.9	Impact Rating		Cood	1 411							. s.c during CC			
	inpact rating						Total	21		Impor	t Score	Scale	1	
⊢							Max Possible	23	0.0-0.3 Negligible 1					
⊢						l				0.3-0.5	Low			
⊢							Impact	0.64		0.5-0.7	Medium	3		





Grousemount Wind Farm

 Location:
 Access Track 31: T20 Spur

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Acces	s Track 31: T	20 Spur					
No.	Likelihood/ Impact Factors	Value		Rating	-	Rating Value	Weighting	Score	Comment				
			1	2	3								
10	Ground Conditions												
1.0	Peat												
11	Peat Depth	1 1m	<1m	>3m	1-3m	3	2	6	Based on peat pro	bes and site i	investigation c	arried out by	IGSL in 2015.
12	Peat Condition in Trial Pits	Slowly squeezing	Drv/ Stands well	Slowly squeezing	Extremely Wet/	2	- 1	2	Trial pits carried ou	ut by IGSL in	2015.		
	Subsoil Characteristics				Undiggable	_		_		,			
1.3	Subsoil Type	Sandy gravelly silt	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial pits carried ou	ut by IGSL in	2015.		
1.4	Peat fibres continuous across transition to subsoil	Yes	Glacial Till Yes	Partially	Clay No	1	1	1	Trial pits carried ou	ut by IGSL in	2015.		
2.0	Topography									,			
	Situation						1						
2.1	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	SE	SW. S. SE	W.E	NW. N. NE	1	1	1	From LiDar				
	Slope Angle	-	- , -, -	,									
2.3	Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3º - 7º	3	2	6	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	verage rainfall	from 1985 - 2	014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and sit	te walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	graphy and sit	te walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and sit	te walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	/alue assume	ed.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ied.			
	Likelihood Rating									r		T	1
							Total	48		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
<u> </u>										0.3-0.5	Low	2	
							Likelihood	0.67		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
┣—							1						
					IN TO A 1	от —							
5.0	Impact Eastern				IMPA								
5.0	Impact Factors	Maalium	Small volume	Medium	Potential for Bog	0							
5.1		Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6	From LiDor				
5.2	Provinity to defined valley	valley	bowi/ contained	watercourse	valley	3		3	From LiDer				
5.3	Valley profile	<200m	>500m	200-500m	<200m	3	1	3	From LiDer				
5.4		Steep	Flat	Sonoitivo	Drinking water	3 0	1	3 0	I TOITI LIDAI				
5.5	Public roads in notantial post flow path	Sensitive	Non-Sensitive		supply Regional Board		1		From aerial photos	ranhy and cit	e walk		
5.6 5.7	Overhead lines in potential peat flow path	No	NO Phone Lines	Electricity LV	Electricity MV LIV		1	1	From service draw	ings and site	walk		
5./	Ruildings in potential post flow path	INO	FIONE LINES	Electricity, LV	Durallia -	1		1	From porial shot-	mys and site	wain		
5.8	Canability to respond (access and resources)	INO Coord	INO Coord	Farm out-houses	Dwelling	1	1	1	Based on contract	or facilities		opetruction	
5.9	Impact Pating	Good	Good	Fair	Poor			1	Dased on contracto	or raciillies or	i aite during co	onsu ucuon.	
	inpact natility						Total	01		Imag	at Score	Soala	
┣──							Max Possiblo	23		0.0-0.3	Negligible	J	
<u> </u>							INUX I VOOIDIE			0.3-0.5	Low	2	
┣		<b> </b>							l	0.0-0.0	LOW	-	





#### Peat Stability Risk Assessment **Grousemount Wind Farm**

Access Track 32: Main Spine Road Parts 3 & 4 Intersection - T24 Junc Location: 2015 Inspected on: Inspected by: ESBI / BLP Completed by: SS August 2015

Date:

				Acc	ess Track 32	: Main Spine	Road Parts 3	& 4 Intersect	section - T24 Junction							
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment							
			1	2	3	000										
1.0	Cround Conditions				LIKELIH											
1.0	Poot															
11	Peat Depth	0.8m	<1m	_3m	1-3m	1	2	2	Based on peat prol	hes and site i	investigation c	arried out by	IGSL in 2015			
1.1	Peat Condition in Trial Pits	Stands Well	Drv/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried ou	It by IGSL in	2015.	amou out of	1002 11 2010.			
	Subsoil Characteristics		Bry, etailae ireir	olomy oquoozing	Undiggable				p							
1.3	Subsoil Type	Sandy gravelly silt	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial pits carried ou	ut by IGSL in	2015.					
1.4	Peat fibres continuous across transition to subsoil	Partially	Glacial Till Yes	Partially	Clay No	2	1	2	Trial pits carried ou	It by IGSL in	2015.					
2.0	Topography				-				•	-						
	Situation															
2.1	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar							
2.2	Slope Aspect	E	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar							
	Slope Angle															
2.3	Slope Angle - Ground Surface	0° - 5°	<3°	>7°	3º - 7º	3	2	6	From LiDar							
	Geomorphology															
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar							
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar							
3.0	Hydrology															
	Hydrology															
3.1	In broad valley upslope from defined watercourse	Yes, slopes $\ge 3^{\circ}$	No	Yes, slopes < 3°	Yes, slopes $\ge 3^{\circ}$	3	1	3	From LiDar							
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar							
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1								
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk							
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2								
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	014.			
4.0	Other Factors								2							
	Vegetation															
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and sit	e walk					
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk					
	Slide History															
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd					
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk							
4.5	Peat workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	rapny and sit	e waik					
4.6	Other Factors	Calid Dood	Calid Daad		Floating Dood		1	1	No ovicting road W		d					
4.0	Time of year for construction	Late Summer/	Solid Hoad	Winter / Early	Late Summer/	2	1	2	Worst case assum	alue assume	.u.					
4.7		Autumn	Spring	Summer	Autumn	3	1	3	W0131 Case assum	eu.						
							Total	45		l ikeliho	od Score	Scale				
							Max Possible	63		0.0-0.3	Negligible	1				
										0.3-0.5	Low	2				
							Likelihood	0.71		0.5-0.7	Medium	3				
										0.7-1.0	High	4				
-	L															
					IMPAG	т										
5.0	Impact Factors															
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium (1.000 -	Potential for Bog	2	3	6								
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar							
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar							
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar							
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2								
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and sit	e walk					
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk							
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and sit	e walk					
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities or	n site during co	onstruction.				
	Impact Rating															
							Total	21	Impact Score Scale							
							Max Possible	33		0.0-0.3	Negligible	1				
<u> </u>									<b></b>	0.3-0.5	Low	2				
				1			limnact	0.64		05.07	Modium	3				







Grousemount Wind Farm

 Location:
 Access Track 34: T24 Spur

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Acces	s Track 34: T	24 Spur						
Na	Likelihaad/Impact Fasters	Value		Rating		Deting Volue	Weighting	Caerro	Commont					
NO.	Likelinood/ impact Factors	value	1	2	3	Rating value	weighting	Score	Comment					
					LIKELIH	OOD			•					
1.0	Ground Conditions													
	Peat													
1.1	Peat Depth	1.3m	<1m	>3m	1-3m	3	2	6	Based on peat pro	bes and site i	nvestigation c	arried out by	IGSL in 2015.	
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried ou	ut by IGSL in 2	2015.			
	Subsoil Characteristics													
1.3	Subsoil Type	Sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried ou	ut by IGSL in :	2015.			
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	ut by IGSL in :	2015.			
2.0	Topography													
	Situation													
2.1	Elevation OD [m]	400m	<200m		>200m	3	1	3	From LiDar					
2.2	Slope Aspect	NW	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar					
	Slope Angle													
2.3	Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3º - 7º	3	2	6	From LiDar					
	Geomorphology													
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar					
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar					
3.0	Hydrology													
	Hydrology													
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar					
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m	< 200m	1	1	1	From LiDar					
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1						
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk					
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2						
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.					
4.0	Other Factors					-		-	From Met Éireann. Based on average rainfall from 1985 - 2014.					
	Vegetation													
4.1	Vegetation	Grasslands	Drv Heather	Grasslands	Wetlands	2	1	2	From aerial photod	raphy and sit	e walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photod	raphy and sit	e walk			
	Slide History				olanou croman			0	· · · · · · · · · · · · · · · · · · ·					
43	Previous slides in locality	> 5km	⊳ 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd			
4.0	Evidence of movement in peat (e.g. tension cracks, step	No	No		Ves	1	1	1	From site walk	arroy or nota				
4.4	features, compression features)	110	110		103									
45	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photon	raphy and sit	e walk			
4.0	Other Factors	None	None	Culaway, Fulbary	Machine Out				r tom aonai priotog	napity and on	ondat			
4.6		Solid Boad	Solid Boad		Eloating Boad	1	1	1	No existing road. V	alue assume	d			
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assum	ed				
	Likelihood Bating	Autumn	oping	Summer	Autumn									
							Total	48		l ikeliho	od Score	Scale	1	
							Max Possible	72		0.0-0.3	Negligible	1		
										0.3-0.5		2		
							Likelihood	0.67		0.5-0.7	Medium	3		
								0.07		0.7-1.0	High	4		
										0.7-1.0	ngn			
							1							
					IMDAG	<u>۲</u>								
5.0	Impact Factors						r							
5.0	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6						
5.2	Downslope features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	Valley	3	1	3	From LiDar					
5.2	Provinsible realized valley	valley	500m	watercourse	valley	1	1	1	From LiDar					
0.0 E /		Stoor	>000III	200-300m	<200111 Stoor	۱ ٥	1	۱ ه	From LiDar					
5.4 E F		Steep	Fiat	Renetitie	Drinking water	3		3	From Libar					
0.0		Sensitive	INUTI-SERISITIVE	Sensitive	supply	2		2	From aerial photography and site walk					
5.6	Cuerbool lines in potential peat now path	NO	NO	Local Road	Regional Road	1	1	1	From aerial photography and site walk					
5.7	Overnead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk					
5.8		No	No	⊢arm out-houses	Dwelling	1	1	1	From aerial photography and site walk					
5.9	capability to respond (access and resources)	Good	Good	⊦aır	Poor	1	1	1	Based on contractor facilities on site during construction.					
	Impact Rating					_								
							Total	19		Impac	t Score	Scale		
							Max Possible	33		0.0-0.3	Negligible	1		





Grousemount Wind Farm

 Location:
 Access Track 35: T24 Junction - T35 Junction

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

			-		Ac	cess Track 3	5: T24 Junction	on - T35 Junc	unction				
No.	Likelihood/ Impact Factors	Value	1	Rating	3	Rating Value	Weighting	Score	Comment				
				2	LIKELIH	OOD							
1.0	Ground Conditions												
	Peat												
1.1	Peat Depth	2.4m	<1m	>3m	1-3m	3	2	6	Based on peat pro	bes and site i	nvestigation c	arried out by	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Slowly squeezing	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried ou	ut by IGSL in 2	2015.		
	Subsoil Characteristics				Undiggable								
1.3	Subsoil Type	Silty sandy gravel	Gravel/ Firm	Smooth Rock	Soft Sensitive	1.5	1	1.5	Trial pits carried ou	ut by IGSL in 2	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	ut by IGSL in 2	2015.		
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	380m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	N	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3º - 7º	3	2	6	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ $3^{\circ}$	No	Yes, slopes < $3^{\circ}$	Yes, slopes ≥ $3^{\circ}$	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No		Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	. Based on av	erage rainfall	from 1985 - 2	2014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	graphy and sit	e walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	Survey of Irela	nd		
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and sit	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road Late Summer/	Solid Road	Winter / Early	Floating Road Late Summer/	1	1	1	No existing road. V	Value assume	d.		
4.7		Autumn	Spring	Summer	Autumn	3	1	3	worst case assum	1ed.			
							Tetal	40 E		Likaliha	ad Casua	Casla	1
							Max Possible	40.0		0.0-0.3	Negligible	J	
							Max POSSIBle	12		0.3-0.5	Low	· 2	
							l ikelihood	0.67		0.5-0.7	Medium	3	
$\vdash$									<u> </u>	0.7-1.0	High	4	
$\vdash$											- ign		
⊢	1	1	1	1	1	1	1		1				
					IMPA	СТ							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium (1.000	Potential for Bog	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2	1				
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	graphy and sit	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	vings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	graphy and sit	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contract	or facilities on	site during co	onstruction.	
	Impact Rating												
							Total	21		Impac	t Score	Scale	
							Max Possible	33		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Impact	0.64	Γ	0507	Modium	2	





Grousemount Wind Farm

 Location:
 Access Track 36: T35 Spur

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

		Access Track 36: T35 Spur													
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment						
			1	2	3										
					LIKELIH	000	r								
1.0	Ground Conditions														
	Peat														
1.1	Peat Depth	0.7m	<1m	>3m	1-3m	1	2	2	Based on peat pro	bes and site i	nvestigation ca	arried out by	IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried ou	ut by IGSL in 2	2015.				
	Subsoil Characteristics														
1.3	Subsoil Type	Sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried ou	ut by IGSL in 2	2015.				
1.4	Peat fibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried ou	ut by IGSL in 2	2015.				
2.0	Topography														
	Situation														
2.1	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar						
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar						
	Slope Angle			-											
23	Slope Angle - Ground Surface	$0^{\circ} - > 10^{\circ}$	-3°	<b>⊳</b> 7⁰	3° - 7°	3	2	6	From LiDar						
2.0	Geomorphology	0 - 210	~~~~	21	5-7		_								
0.4		Planar	Canadya	Planar	Canvay		1		From LiDor						
2.4		Flariar	Concave	Flariar	Convex	2	1	2	From LiDar						
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LIDar						
3.0	Hydrology														
	Hydrology														
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes $< 3^{\circ}$	Yes, slopes ≥ 3°	3	1	3	From LiDar						
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar						
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1							
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk						
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2							
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall f	rom 1985 - 2	014.		
4.0	Other Factors														
	Vegetation														
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site	e walk				
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photod	From aerial photography and site walk					
	Slide History			. an					· · • • · • • • • • • • • • • • • • • •						
12	Previous slides in locality	5 Ekm	- Ekm	- Ekm	On cito	1	2	2	From Geological Survey of Ireland						
4.3	Evidence of movement in peat (e.g. tension cracks, step	> SKIII	> SKIII	< SKIII	Off site	1	2	2	From site walk						
4.4	features, compression features)	INO	INO	-	Yes	1	1	1	From site walk						
	Land Use						-		4						
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and site	e walk				
	Other Factors														
4.6	Existing roads in place	Solid Road	Solid Road	Minter (Fork)	Floating Road	1	1	1	No existing road. V	/alue assume	d.				
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assum	ied.					
	Likelihood Rating														
							Total	43		Likeliho	od Score	Scale			
							Max Possible	72		0.0-0.3	Negligible	1			
										0.3-0.5	Low	2			
							Likelihood	0.60		0.5-0.7	Medium	3			
							1			0.7-1.0	High	4			
													<u> </u>		
								1							
					IMPAC	<u>.</u> т									
5.0	Impact Factors					•									
5.1	Volume of peat in potential peat flow	Modium	Small volume	Medium	Potential for Bog	2	2	6							
5.1		Vallari	(<1.000m <sup>3</sup> )	(1.000 - Minor undefined	burst	2	3	0	From LiDor						
5.2		valley	Bowi/ contained	watercourse	valley	3	1	3	FIUIII LIDAF						
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LIDar						
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	⊦rom LiDar						
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2							
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk						
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site	walk				
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	graphy and site	e walk				
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on	site during co	nstruction.			
	Impact Rating														
							Total	21		Impac	t Score	Scale			
							Max Possible	33		0.0-0.3	Negligible	1			
			[			[					3 3				





Grousemount Wind Farm

 Location:
 Access Track 37: T35 Junction - T31

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

0.3-0.5

	Access Track 27: T25 Junction - T21													
			Pating				ICK 37: 135 JU							
No.	Likelihood/ Impact Factors	Value	1	2	3	Rating Value	Weighting	Score	Comment					
					LIKELIH	OOD								
1.0	Ground Conditions													
	Peat													
1.1	Peat Depth	0.6m	<1m	>3m	1-3m	1	2	2	Based on peat prob	bes and site in	nvestigation ca	arried out by	IGSL in 2015.	
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried ou	t by IGSL in 2	2015.			
	Subsoil Characteristics													
1.3	Subsoil Type	Soft sandy gravelly clay	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried ou	t by IGSL in 2	2015.			
1.4	Peat fibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried ou	frial pits carried out by IGSL in 2015.				
2.0	Topography													
	Situation													
2.1	Elevation OD [m]	350m	<200m		>200m	3	1	3	From LiDar					
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar					
	Slope Angle													
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar					
	Geomorphology													
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar					
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar					
3.0	Hydrology													
	Hydrology													
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ $3^{\circ}$	No	Yes, slopes < $3^{\circ}$	Yes, slopes ≥ $3^{\circ}$	3	1	3	From LiDar					
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar					
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1						
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk					
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2						
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on ave	erage rainfall f	rom 1985 - 2	014.	
4.0	Other Factors													
	Vegetation													
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site	e walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photogr	raphy and site	e walk			
	Slide History													
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland					
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk					
	Land Use													
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site	e walk			
	Other Factors													
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Early	Floating Road	1	1	1	No existing road. Va	alue assume	d.			
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assume	ed.				
	Likelihood Rating													
							Total	43		Likeliho	od Score	Scale		
<u> </u>							Max Possible	72		0.0-0.3	Negligible	1		
<u> </u>										0.3-0.5	Low	2		
							Likelihood	0.60		0.5-0.7	Medium	3		
<u> </u>										0.7-1.0	High	4		
<u> </u>														
						ъ <b>т</b>								
5.0	Impact Factore				IMPAC									
5.0	Volume of peat in potential peat flow	Modium	Small volume	Medium	Potential for Bog	2	2	6						
5.1	Downsione features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	burst	2	3 1	3	From LiDar					
5.2	Proximity to defined valley	valley	~500m	watercourse	valley	3	1	3	From LiDar					
5.3 5.4	Valley profile	<200111 Steen	>0UUIT Flat	Lou-South	<200111 Steen	3	1	3	From LiDar					
5.4	Downstream aquatic environment	Sensitivo	Fiai	Sensitivo	Drinking water	ა ი	1	3 2						
5.5 5.6	Public roads in notential peat flow path	No	No.	Local Road	supply Regional Poor	2 1	1	ے	From aerial photog	ranhy and eite	e walk			
0.6 5.7	Overhead lines in potential post flow path	INO No	INO Dhone Lines	Electricity LV	Electricity MV LIV	4	1	1	From service drawing	nge and site	= wait			
5./	Ruildings in potential peat flow path	INO No	FIIORE LINES	Electricity, LV	Dwelling	4	1	1	From service drawl	raphy and city	wain a walk			
5.8 5.0	Canability to respond (access and resources)	INO	INO	Farm OUT-NOUSES	Dweiling	4	1	1	Based on contracto	apiny and site	eite during an	netruction		
5.9	Impact Pating	Good	Good	Fair	Poor		I I		Dased on contracto	n raciillies on	site during CO	nau douon.		
	inipact natility						Total	01		Impos	t Score	Scalo		
<u> </u>							Max Possible	33		0.0-0 3	Negligible	1		
										0.0 0.0				







Grousemount Wind Farm

 Location:
 Access Track 39: T30 Site Access (Ch. 1450 - Ch. 2350)

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

	Access Track 39: T30 Site Access (Ch. 1450 - Ch. 2350)															
				Bating	ALLESS	11dCK 39. 13	Sile Acces									
No.	Likelihood/ Impact Factors	Value	1	2	3	Rating Value	Weighting	Score	Comment							
	• 		•	•	LIKELIH	OOD		•	•							
1.0	Ground Conditions															
	Peat															
1.1	Peat Depth	1.3m	<1m	>3m	1-3m	3	2	6	Based on peat pro	bes and site	investigation c	arried out by	IGSL in 2015.			
1.2	Peat Condition in Trial Pits	Slowly squeezing	Dry/ Stands well	Slowly squeezing	Extremely Wet/	2	1	2	Trial pits carried ou	ut by IGSL in	2015.					
	Subsoil Characteristics		-		Undiddaple											
1.3	Subsoil Type	Sandy gravelly silt	Gravel/ Firm	Smooth Rock	Soft Sensitive	3	1	3	Trial pits carried ou	ut by IGSL in	2015.					
1.4	Peat fibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried ou	ut by IGSL in	2015.					
2.0	Topography									,						
	Situation															
21	Elevation QD [m]	330m	<200m		>200m	3	1	3	From LiDar							
2.1	Slope Aspect	SE	SW S SE	WE	NW N NE	1	1	1	From LiDar							
2.2	Slope Angle	0L	011, 0, 0L	, <u>L</u>	1007, 10, 10L	•			i ioni Libui							
2.2	Slope Angle - Ground Surface	00 400	<u></u>	70	 	2	2	e	From LiDar							
2.5		3" - >10"	<3	>/*	3' - 7'	3	2	0								
0.4		Disease	0	Disease	0	-			From LiDer							
2.4		Planar	Concave	Fanar	Convex	2		2	From LiDer							
2.5	Ulstance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LIDar							
3.0	Hyarology															
┣──	Hydrology								<b>.</b>							
3.1	In broad valley upslope from defined watercourse	Yes, slopes $\ge 3^{\circ}$	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	⊢rom LiDar							
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar							
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1								
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk							
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2								
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	verage rainfall	from 1985 - 2	2014.			
4.0	Other Factors															
	Vegetation															
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and si	te walk					
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and si	te walk					
	Slide History															
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland							
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk							
	Land Use															
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	te walk					
	Other Factors															
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assume	ed.					
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assum	ed.						
	Likelihood Rating	Autumin		Summer	Autumn											
							Total	48		Likeliho	ood Score	Scale	1			
							Max Possible	72		0.0-0.3	Negligible	1				
										0.3-0.5	Low	2				
							Likelihood	0.67		0.5-0.7	Medium	3				
<u> </u>							-			0.7-1.0	High	_4				
<u> </u>																
├	<u> </u>	1					1									
					IMDA	°т										
5.0	Impact Factors				INFA											
5.0	Volume of neat in notential neat flow	Madium	Small volume	Medium	Potential for Bog	0	0	6								
0.1			(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	0	From LiDer							
5.2	Downslope realures	valley	Bowi/ contained	watercourse	valley	3	1	3	From LiDer							
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LIDar							
5.4	valley profile	Steep	Hat	Intermediate	Steep Drinking water	3	1	3	From LIDar							
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2								
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	⊢rom aerial photog	raphy and sit	te walk					
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	⊢rom service draw	ings and site	walk					
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and sit	te walk					
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities or	n site during co	onstruction.				
	Impact Rating									1			1			
		ļ					Total	21		Impac	ct Score	Scale				
		ļ					Max Possible	33		0.0-0.3	Negligible	1				







Grousemount Wind Farm

 Location:
 Access Track 41: T30 Site Access (Ch. 0 - Ch. 650)

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

Access Track 41: T30 Site Access (Ch. 0 - Ch. 650)																		
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment									
			1	2														
1.0					LIKELIN		1											
1.0																		
1.1	Peat Depth	2.2m	<1m	>3m	1-3m Extremely Wet/	3	2	6	Based on peat pro	bes and site i	nvestigation c	arried out by	IGSL in 2015.					
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Undiggable	1	1	1	Trial pits carried or	ut by IGSL in 2	2015.							
	Subsoil Characteristics	Coft condu	Crovel/ Firm		Coff Considius													
1.3	Subsoil Type	gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried or	ut by IGSL in 2	2015.							
1.4	Peat fibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried or	ut by IGSL in 2	2015.							
2.0	Topography																	
	Situation																	
2.1	Elevation OD [m]	280m	<200m		>200m	3	1	3	From LiDar									
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar									
	Slope Angle																	
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar									
	Geomorphology																	
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar									
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar									
3.0	Hydrology																	
0.0	Hydrology																	
2.1	In broad valley upsione from defined watercourse	Von alance > c <sup>0</sup>	No	Voo alana - an	Voo classes co	2	1	3	From LiDar									
0.1	Distance from head of defined watercourse	res, siopes ≥ 3°	000 × 200~	7 es, siopes < 3°	res, siopes ≥ 3°		1	3 2	From LiDar									
3.2		< 200m	> 300m	200 - 300m	< 200m Springs/	3		3	FIOIT LIDar									
3.3		Localised	Localised	Ponded in drains	Surface Water	1	1	1										
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk									
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2										
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	. Based on av	erage rainfall	from 1985 - 2	014.					
4.0	Other Factors																	
	Vegetation																	
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and sit	e walk							
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk									
	Slide History																	
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland									
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk									
	Land Use																	
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and sit	e walk							
	Other Factors																	
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. \	/alue assume	d.							
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assum	ned.								
	Likelihood Rating	Autumn		Summer	Autumn													
							Total	47		Likelibo	od Score	Scale						
							Max Possible	72		0.0-0.3	Negligible	1						
$\vdash$										0.3-0.5	Low							
$\vdash$							l ikelihood	0.65		0.5-0.7	Medium	2						
┣─								0.03		0.3-0.7		3						
┣──										0.7-1.0	High	4						
┣—																		
						~												
					IMPAC													
5.0	Impact Factors		Small volume	Medium	Potential for Por													
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 -	burst	2	3	6										
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar									
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar									
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar									
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2										
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk									
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	rings and site	walk							
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	graphy and sit	e walk							
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contract	or facilities on	site during co	onstruction.						
	Impact Rating																	
							Total	21		Impac	t Score	Scale						
⊢					ļ		Max Possible	33		0.0-0.3	Nealiaible	1						
$\vdash$										0.3-0.5	Low	2						
1				1														





Grousemount Wind Farm

 Location:
 Access Track 42: T30 Site Access Junction - T29 Junction

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

		Access Track 42: T30 Site Access Junction - T29 Junction													
No.	Likelihood/ Impact Factors	Value	1	Rating	2	Rating Value	Weighting	Score	Comment	Comment					
1.0	Ground Conditions														
	Peat														
1.1	Peat Depth	0.6m	<1m	>3m	1-3m	3	2	6	Based on peat prot	oes and site i	nvestigation c	arried out by	IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried ou	t by IGSL in	2015.				
	Subsoil Characteristics				Undiggable										
1.3	Subsoil Type	Soft sandy	Gravel/ Firm	Smooth Rock	Soft Sensitive	3	1	3	Trial pits carried ou	t by IGSL in	2015.				
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	t by IGSL in	2015.				
2.0	Topography														
	Situation														
2.1	Elevation OD [m]	345m	<200m		>200m	3	1	3	From LiDar						
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar						
	Slope Angle														
2.3	Slope Angle - Ground Surface	0° - >7°	<3°	>7°	3º - 7º	3	2	6	From LiDar						
	Geomorphology														
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar						
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar						
3.0	Hydrology														
	Hydrology														
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar						
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar						
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1							
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk						
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2							
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.						
4.0	Other Factors														
	Vegetation														
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and sit	e walk				
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk				
	Slide History														
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd				
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk						
	Land Use														
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	e walk				
	Other Factors														
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Fork	Floating Road	1	1	1	No existing road. V	alue assume	d.				
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assume	ed.					
	Likelihood Rating									1		-	1		
							Total	48		Likeliho	od Score	Scale			
							Max Possible	72		0.0-0.3	Negligible	1			
										0.3-0.5	Low	2			
							Likelihood	0.67		0.5-0.7	Medium	3			
										0.7-1.0	High	4			
						<b>\</b> T									
5.0	laure et Ersteur				IMPAG	از ا									
5.0	Impact Factors	Madium	Small volume	Medium	Potential for Bog	0	0	C							
5.1		Velley	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	0	From LiDor						
5.2	Provinsible realizes	valley	500m	watercourse	valley	2	1	2	From LiDar						
5.3		<20011	MUUC<	Lou-South	<20011	3	1	3	From LiDar						
5.4	Downstream aquatic environment	Schoiting	Fiat	Sonoitivo	Drinking water	ა ი	1	3 2							
0.5	Public roads in notential peat flow path	Sensitive	Non-sensitive		supply Regional Dead	2	1	2	From aerial photos	ranhy and cit	e walk				
0.6 5 7	Overhead lines in potential peat flow path	NO No	NO Phone Lines	Electricity LV	Electricity MV	1	1	1	From service drawi	ings and site	e waik walk				
0./	Ruildings in potential past flow path	INO	FIIORE LINES	Electricity, LV	Duralling	4		1	From porial shot-	From service drawings and site walk					
5.8	Canability to respond (access and recourses)	INO Good	INO Good	Farm Out-nouses	Dweiling	1	1	1	From aerial photography and site walk						
5.9		Good	Good	Fair	Puur			1		nacinues or					
	import fidding						Total	91		Impo	t Score	Scale	1		
├──							Max Possible	21		0.0-0.3	Negligible	Jule 1			
┣──							HUA I USSIDIE			0.3-0.5	Low	-			
╞──							Impact	0.64		0.5-0.7	Medium	3			









**Grousemount Wind Farm** 

Location: Access Track 45: T29 Junction - T27 2015 Inspected on: Inspected by: ESBI / BLP Completed by: SS August 2015 Date:

						Access Tra	ick 45: T29 Ju	Inction - T27						
No.	Likelihood/ Impact Factors	Value		Rating	2	Rating Value	Weighting	Score	Comment					
				2			I	I	I					
10	Ground Conditions													
1.0	Peat													
11	Peat Depth	0.6m	~1m	>3m	1-3m	3	2	6	Based on peat pro	hes and site ir	vestigation c	arried out by	IGSL in 2015	
1.1	Peat Condition in Trial Pits	Stands Well	Dn/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial nits carried ou	it by IGSL in 2	2015	arried out by		
1.2		Starius Weir	Dry/ Starius weil	Slowly squeezing	Undiggable	1	1	1	mar pils camed of		2013.			
1.0		Soft sandy	Gravel/ Firm	Smooth Doold	Soft Sensitive	2	1	2	Trial pite corriad o	it by IGSL in 2	0015			
1.3		gravelly silt	Glacial Till	Sillootii Rock	Clay	3	1	3	Trial pits carried ou		2015.			
1.4		Partially	Yes	Partially	INO	2	1	2	Thai pits carried of					
2.0	l opograpny													
0.4		050	000		000				From LiDor					
2.1		35011	<200111	W 5	>20011	3	1	3	From LiDar					
2.2		S, SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LIDar					
			-			-		-	E 110					
2.3	Siope Angle - Ground Surrace	0 <sup>°</sup> - >10 <sup>°</sup>	<3°	>7°	3" - 7"	3	2	6	From LIDar					
	Geomorphology			-	-			_	F 115					
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar					
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar					
3.0	Hydrology													
	Hydrology													
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar					
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar					
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1						
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk					
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2						
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on ave	erage rainfall f	rom 1985 - 2	014.	
4.0	Other Factors													
	Vegetation													
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site	e walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site	e walk			
	Slide History								<b></b>					
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland					
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk					
	Land Use													
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site	e walk			
	Other Factors													
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assumed	d.			
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/	3	1	3	Worst case assum	ed.				
	Likelihood Rating	, atomi		Caning	7 GCOTTIT									
							Total	48		Likelihoo	od Score	Scale		
							Max Possible	72		0.0-0.3	Negligible	1		
										0.3-0.5	Low	2		
							Likelihood	0.67		0.5-0.7	Medium	3		
										0.7-1.0	High	4		
					1	1	1	1	1				8	
					IMPAG	ст								
5.0	Impact Factors					-								
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6						
5.2	Downslope features	Vallev	(<1.000m <sup>3</sup> ) Bowl/ contained	Minor undefined	burst Vallev	3	1	3	From LiDar					
5.3	Proximity to defined vallev	<200m	>500m	200-500m	<200m	3	1	3	From LiDar					
5.4	Valley profile	Steen	Flat	Intermediate	Steen	3	1	3	From LiDar					
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2						
5.5	Public roads in potential peat flow path	No	No	L ocal Road	supply Regional Boad	1	1	- 1	From aerial photos	raphy and site	e walk			
5.0	Overhead lines in potential peat flow path	No	Phone Linco	Electricity LV		1	1	1	From service draw	ings and site	walk			
5.7 5.9	Buildings in potential peet flow path	No	No.	Farm out-bouldes	Dwelling	1	1	1	From aerial photos	Iranhy and eite	e walk			
J.0 E.0	Canability to respond (access and resources)	Good	Good	Foir	Boor	1	4	1	Based on contract	naping and site	site during co	nstruction		
0.9	Impact Pating	Good	Good	Fair	Poor				Dased on contracto	or racinues on	Site during CO	nou action.		
	inipact natility						Total	01			Soore	Seel-		
$\left  - \right $							Max Bassible	21			Norliniti	June		
				1	1	1	wax Possible	33	1	0.0-0.3	ivegligible	1	1	



0.3-0.5

Negligible

Lov


Grousemount Wind Farm

 Location:
 Access Track 46: T27 - T30 Site Access Junction

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

		Access Track 46: T27 - T30 Site Access Junction											
No	l ikelihood/ Impact Factors	Value		Rating		Bating Value	Weighting	Score	Comment				
110.		value	1	2	3		weighting	Score	Somment				
		-			LIKELIH	OOD	1	1	-				
1.0	Ground Conditions												
	Peat												
1.1	Peat Depth	1.2m	<1m	>3m	1-3m Extremely Wet/	3	2	6	Based on peat pro	bes and site i	nvestigation c	arried out by	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Slowly squeezing	Dry/ Stands well	Slowly squeezing	Undiggable	2	1	2	Trial pits carried ou	ut by IGSL in	2015.		
	Subsoil Characteristics	Soft sandy	Gravel/ Firm		Soft Sensitive								
1.3	Subsoil Type	gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried ou	ut by IGSL in	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	ut by IGSL in	2015.		
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	350m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	E	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar				
			-			-	-	_					
2.3	Slope Angle - Ground Surface	3º - >10º	<3°	>7º	3º - 7º	3	2	6	From LiDar				
	Geomorphology	-				-		_	E 115				
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5		>100m	> 100m	50-100m	< 50m	1	1	1	From LIDar				
3.0	Hydrology												
<u> </u>								-	From Lin				
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from nead of defined watercourse	< 200m	> 300m	200 - 300m	< 200m Springs/	3	1	3	⊢rom LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	<b>F M</b> . <del>É</del> :			/ /005 /	
3.6		>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Eireann.	Based on av	erage rainfall	from 1985 - 2	2014.
4.0	Other Factors												
<u> </u>	Vegetation					-		_					
4.1		Grasslands	Dry Heatner	Grasslands	Wetlands	2	1	2	From aerial photog	grapny and sit	e waik		
4.2		N/A	Good Growth	Fair	Stunted Growth	U	1.5	0	From aerial photog	grapny and sit	e waik		
-	Silde History	51	51		0.1				From Occlesion 0				
4.3	Evidence of movement in peat (e.g. tension cracks, step	> 5Km	> 5km	< 5KM	Un site		2	2	From eite welk	urvey or Ireia	nu		
4.4	features, compression features)	NO	NO	-	Yes	1	1	1	From site walk				
4.5	Land Use	Nezz	Nezz	Outrough Teachang	Mashina Out				From parial abotas	wanhu and ait	a walk		
4.5		None	None	Cutaway/Turbary	Machine Cut	I		I	From aenai photog	jrapny and sit	e waik		
4.6		Calid Dood	Colid Dood		Electing Dood	1	1		No ovicting road \		d		
4.0	Time of year for construction	Late Summer/	Solid Hoad	Winter / Early	Late Summer/	2	1	2	Worst case assum	and			
4.7		Autumn	Spring	Summer	Autumn	3	1	3	W0131 Case assum	ieu.			
							Total	50		l ikelibe	od Score	Scale	1
┣──							Max Possible	72		0.0-0.3	Nealigible	1	
┣──							Mux P USSIDIE	12		0.3-0.5	Low	2	
┣──							l ikelihood	0.69		0.5-0.7	Medium	3	
┣──								0.03		0.7-1.0	High	4	
<u> </u>										0.7 1.0	riigh		
<b> </b>						1							
					IMPA	СТ							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
5.2	Downslope features	Vallev	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	burst Vallev	3	1	3	From LiDar				
5.3	Proximity to defined vallev	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steen	Flat	Intermediate	Steen	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	1	1	1	From aerial photoc	araphy and sit	e walk		
5.0	Overhead lines in potential peat flow path	No	Phone Lines	Electricity LV	Flectricity MV HV	1	1	1	From service draw	ings and site	walk		
5.9	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photoc	raphy and eit	e walk		
5.0	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contract	or facilities or	site during of	onstruction	
3.9	Impact Rating		Cood	1 411	1.001						. s.c. during Cl		
							Total	21		Imper	t Score	Scale	1
┣──							Max Possible	23		0.0-0.3	Negligible	1	
<u> </u>										0.3-0.5	Low	2	
┣		1							l	0.0-0.5	LOW	-	





Grousemount Wind Farm

 Location:
 Access Track 47: T26 Spur

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

						Acces	s Track 47: T	26 Spur					
No.	Likelihood/ Impact Factors	Value		Rating	-	Rating Value	Weighting	Score	Comment				
			1	2	3								
10	Ground Conditions												
1.0	Peat												
11	Peat Depth	0.9m	<1m	>3m	1-3m	1	2	2	Based on peat pro	bes and site i	investigation c	arried out by	IGSL in 2015.
12	Peat Condition in Trial Pits	Stands Well	Drv/ Stands well	Slowly squeezing	Extremely Wet/	1	- 1	1	Trial pits carried ou	ut by IGSL in	2015.		
	Subsoil Characteristics			y	Undiggable					,			
1.3	Subsoil Type	Sandy gravelly silt	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial pits carried ou	ut by IGSL in	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Glacial Till Yes	Partially	Clay No	2	1	2	Trial pits carried ou	ut by IGSL in	2015.		
2.0	Topography							_		,			
	Situation						1						
2.1	Elevation OD [m]	380m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	SE	SW. S. SE	W.E	NW. N. NE	1	1	1	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3º - 7º	3	2	6	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	verage rainfall	from 1985 - 2	014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and sit	te walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	graphy and sit	te walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No		Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and sit	te walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road	Minter / Forth	Floating Road	1	1	1	No existing road. V	/alue assume	ed.		
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assum	ied.			
	Likelihood Rating									<b></b>		1	
							Total	44		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.61		0.5-0.7	Medium	3	
<u> </u>										0.7-1.0	High	4	
┣──							I						
					IN TO A 1	от —							
5.0	Impact Eactors				IMPA								
5.0	Impact Factors	Maalium	Small volume	Medium	Potential for Bog	0							
5.1		Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6	From LiDor				
5.2	Provinity to defined valley	valley	bowi/ contained	watercourse	valley	3 2	1	ు స	From LiDar				
5.3	Valley profile	<200m	>500m	∠00-500m	<200m	3	1	3	From LiDer				
5.4		Steep	Flat	Sonoitivo	Drinking water	3 0		3 0	I TOITI LIDAI				
5.5	Public roads in notential past flow path	Sensitive	Non-Sensitive		supply Regional Board		1		From aerial photos	ranhy and cit	e walk		
5.6 5.7	Overhead lines in potential peat flow path	NO NO	NO Phone Lines	Electricity LV	Electricity MV LIV			1	From service draw	ings and site	walk		
5./	Ruildings in potential past flow path	INO No	FIONE LINES	Electricity, LV	Durallia -	1		1	From porial shot-	mys and site	wain		
5.8	Canability to respond (access and recourses)	INO Coord	INO Coord	Farm out-houses	Dwelling	1	1	1	Based on contract	or facilities		opetruction	
5.9	Impact Pating	Good	Good	Fair	Poor				Dased on contracto	or raciillies or	i aite during co	onsu ucuon.	
	inpact rating						Total	91		Impo	t Score	Scalo	
├──							Max Possible	21		0.0-0.3	Negligible	1	
<u> </u>							INUX I VOOIDIE			0.3-0.5	Low	2	
┣		<b> </b>							l	0.0-0.0	LOW	-	







Grousemount Wind Farm

 Location:
 Access Track 49: T38 Spur (Ch. 300 - Ch. 410)

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

					Ac	cess Track 4	9: T38 Spur (0	Ch. 300 - Ch. 4	Ch. 410)				
No.	Likelihood/ Impact Factors	Value		Rating	L	Rating Value	Weighting	Score	Comment				
	· ·		1	2	3								
10					LIKELIH								
1.0	Ground Conditions												
1.1	Peat Depth	0.9m	.1m	× 2m	1.9m	1	2	2	Based on peat prot	oos and site i	nvestigation o	arried out by	IGSL in 2015
1.1	Post Condition in Trial Pite	Standa Wall	Standa wall	Slowly caugozing	Extremely Wet/	1	1	1	Trial pits carried ou	it by IGSL in f	2015	amed out by	100E 111 2013.
1.2		Starius weil	Dry/ Stands well	Slowly squeezing	Undiggable	I	1	1	That pits carried ou		2013.		
13		Soft sandy	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial pits carried ou	it by IGSL in t	2015		
1.0	Peat fibres continuous across transition to subsoil	gravelly silt Partially	Glacial Till	Partially	Clay	2	1	2	Trial pits carried ou	it by IGSL in t	2015		
2.0		1 artially	105	i artiany	110	L		-					
2.0	Situation												
21	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	N	SW. S. SE	W.E	NW. N. NE	3	1	3	From LiDar				
	Slope Angle			,_	,	-		-					
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	.3° - 7°	3	2	6	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	2014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site	e walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irelar	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Farly	Floating Road	1	1	1	No existing road. V	alue assume	d.		
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assume	ed.			
_	Likelihood Rating						L			·			1
┣──								46		Likeliho	od Score	Scale	
┣—							wax Possible	/2		0.0-0.3	ivegligible	1	
┣─							l ikelihaad	0.64		0.5-0.5	Low	2	
┣─							LIKEIINOOD	0.64		0.5-0.7	High	3	
├──										0.7-1.0	High		
├──							1		1				
					IMPA	ст							
5.0	Impact Factors												
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
5.2	Downslope features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	burst Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	, <200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and site	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawi	ings and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on	site during co	onstruction.	
	Impact Rating												
							Total	21		Impac	t Score	Scale	
							Max Possible	33		0.0-0.3	Negligible	1	1
										0.3-0.5	Low	2	





Grousemount Wind Farm

 Location:
 Access Track 50: T36 Spur

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

Access Track 50: T36 Spur													
				Rating					_				
No.	Likelihood/ Impact Factors	Value	1	2	3	Rating Value	Weighting	Score	Comment				
					LIKELIH	OOD							
1.0	Ground Conditions												
	Peat												
1.1	Peat Depth	0.8m	<1m	>3m	1-3m	3	2	6	Based on peat prot	pes and site in	nvestigation ca	arried out by	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried ou	t by IGSL in 2	2015.		
	Subsoil Characteristics												
1.3	Subsoil Type	Soft sandy gravelly silt	Gravel/ Firm	Smooth Rock	Soft Sensitive	3	1	3	Trial pits carried ou	t by IGSL in 2	2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	t by IGSL in 2	2015.		
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	370m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	E	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Ves slopes > 3°	No	Ves slopes < 3°	Vec clones > 3º	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4		No	No	-	Surface Water	1	1	1	From site walk				
3.5	Evicting drainage ditches	Varied	Down slope	Varied / Oblique		2	1	2					
3.6	Annual Bainfall	>1400 mm/vr	<1000 mm/vr	1000-1400 mm/vr	>1400 mm/vr	2	1	2	From Met Éireann	Based on av	erage rainfall f	rom 1985 - 2	014
4.0	Other Easters	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yi	5		3	Tion Net Elicam.	Bused on av	stage taimain		
4.0	Vegetation												
4.1	Vegetation	Gracelando	Dry Heathar	Gracelando	Watlanda	0	1	0	From serial photog	raphy and site	walk		
4.1	Forestry (if applicable)	N/A	Good Growth	Epir	Stupted Growth		15	0	From serial photog	raphy and site	a walk		
4.2		N/A	GOOD GIOWIII	Fail	Stunted Growth	0	1.5	0	i forn aeriai priotog	rapity and site	5 Walk		
4.2	Provious clideo in locality	. Elem	. Elem	. Elem	On eite	1	0	0	From Goological St	uniou of Irolar	d		
4.3	Evidence of movement in peat (e.g. tension cracks, step	> SKIII	> JKIII	< SKIII	Vee	1	2	2	From cito wolk	arvey or irelar	iu .		
4.4	features, compression features)	INU	INU	-	fes	1	1	1	FIOIT SILE WAIK				
4.5	Root Workings	Nana	Nana	Cutowey/Turbery	Machina Cut	1		1	From parial photog	raphy and ait	wolk		
4.5		None	None	Cutaway/Turbary	Machine Gut		I	1	From aeriai priolog	rapny and site	e waik		
4.0		Oalid Daad	O alial Data d		Election Decid				No ovieting road V		4		
4.6		Late Summer/	Solid Road	Winter / Early	Late Summer/	1		1	No existing road. V	alue assumed	J.		
4.7		Autumn	Spring	Summer	Autumn	3	I	3	Worst case assume	eu.			
	Likelinood Rating						Tetel	40		l ilealih a	- d 0	Orala	1
								49		Likelino	od Score	Scale	
							Max Possible	/2		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.68		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
						-							
					IMPAC	1							
5.0	Impact Factors		Small volume	Medium	Potential for Bog								
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar				
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply	2	1	2					
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	raphy and site	e walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawi	ngs and site	walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site	e walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on	site during co	nstruction.	
	Impact Rating												
							Total	21		Impac	t Score	Scale	
							Max Possible	33		0.0-0.3	Negligible	1	
							1			0205	1 mu	2	





Grousemount Wind Farm

 Location:
 Access Track 51: T25 Site Access (Ch. 400 - Ch.1650)

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

		Access Track 51: T25 Site Access (Ch. 400 - Ch.1650)											
No.	Likelihood/ Impact Factors	Value		Rating	-	Rating Value	Weighting	Score	Comment				
			1	2	3								
10	Ground Conditions												
1.0	Peat												
11	Peat Depth	1.4m	<1m	>3m	1-3m	3	2	6	Based on peat pro	bes and site i	investigation of	arried out by	IGSL in 2015.
12	Peat Condition in Trial Pits	Stands Well	Drv/ Stands well	Slowly squeezing	Extremely Wet/	1	- 1	1	Trial pits carried or	ut by IGSL in	2015.		
	Subsoil Characteristics				Undiggable					,			
1.3	Subsoil Type	Soft sandy	Gravel/ Firm	Smooth Bock	Soft Sensitive	3	1	3	Trial pits carried ou	ut by IGSL in	2015.		
1.4	Peat fibres continuous across transition to subsoil	gravelly silt Yes	Glacial Till Yes	Partially	Clay No	1	1	1	Trial pits carried ou	ut by IGSL in	2015.		
2.0	Topography									,			
	Situation						-						
2.1	Elevation OD [m]	320m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	NE	SW. S. SE	W.E	NW. N. NE	3	1	3	From LiDar				
	Slope Angle		- ,-,-	,		-		-					
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3º - 7º	3	2	6	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m	< 200m	1	1	1	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	. Based on av	verage rainfall	from 1985 - 2	014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	graphy and sit	te walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	graphy and sit	te walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	Survey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and sit	te walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Fash	Floating Road	1	1	1	No existing road. V	/alue assume	ed.		
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assum	ned.			
	Likelihood Rating									1		T	1
							Total	47		Likeliho	od Score	Scale	
							Max Possible	72		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.65		0.5-0.7	Medium	3	
										0.7-1.0	High	4	
┣—							1						
						ст							
5.0	Impact Factors				IMPAG								
5.0	Volume of peat in potential peat flow	Madium	Small volume	Medium	Potential for Bog	2	2	A					
5.0	Downslope features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	Valley	2	1	2	From LiDar				
5.2	Proximity to defined valley	>500m	~500m	watercourse	valley	1	1	1	From LiDar				
5.3	Valley profile	Steen	Flat	Intermediate	Steen	3	1	3	From LiDar				
5.5	Downstream aguatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2					
5.6	Public roads in potential peat flow path	No	No	L ocal Road	supply Regional Road	1	1	1	From aerial photoc	araphy and eit	e walk		
5.0	Overhead lines in potential peat flow path	No	Phone Lines	Electricity LV	Electricity MV HV	1	1	1	From service draw	ings and site	walk		
5.7	Buildings in potential peat flow path	No	No.	Farm out-bouldes		1	1	1	From aerial photos	and site	e walk		
5.0	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contract	or facilities or	n site during o	onstruction	
3.9	Impact Rating		Cood	1 411							. s.c during 0		
_	in part linking						Total	19		Imper	t Score	Scale	
⊢							Max Possible	33		0.0-0.3	Nealiaible	1	
⊢									1	0.3-0.5	Low	2	
⊢		<u> </u>	<u> </u>	<u> </u>									











Grousemount Wind Farm

 Location:
 Access Track 55: Coillte track through Everwind

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

		Access Track 55: Coillte track through Everwind											
No.	Likelihood/ Impact Factors	Value		Rating	-	Rating Value	Weighting	Score	Comment				
			1	2									
10	Ground Conditions												
1.0	Peat												
11	Peat Depth	0.8m	<1m	>3m	1-3m	1	2	2	Based on peat pro	bes.			
1.1	Peat Condition in Trial Pits	Stands well	Drv/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits have yet	to be excavat	ed. Assumed	that the trial (	bit would stand well
	Subsoil Characteristics		Diff Clande Hein	cioniy equeezing	Undiggable	•			based on nearby d	rains.			
1.3	Subsoil Type		Gravel/ Firm	Smooth Bock	Soft Sensitive		1	0	Trial pits have vet	to be excavat	ed		
1.4	Peat fibres continuous across transition to subsoil		Glacial Till Yes	Partially	Clay No		1	0	Trial pits have vet	to be excavat	ed		
2.0	Topography				-								
	Situation												
2.1	Elevation OD [m]	380m	<200m		>200m	3	1	3	From LiDar				
2.2	Slope Aspect	SW	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar				
	Slope Angle												
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar				
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar				
3.0	Hydrology												
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar				
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1					
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on av	erage rainfall	from 1985 - 2	014.
4.0	Other Factors												
	Vegetation												
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and sit	e walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and sit	e walk		
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Irela	nd		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk				
	Land Use												
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and sit	e walk		
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assume	d.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ed.			
	Likelihood Rating									R			
							Total	39		Likeliho	od Score	Scale	
							Max Possible	66		0.0-0.3	Negligible	1	
										0.3-0.5	Low	2	
							Likelihood	0.59		0.5-0.7	Medium	3	
⊨										0.7-1.0	High	4	
⊢													
						<b></b>							
	h				IMPAC								
5.0	Impact Factors		Small volume	Medium	Potential for Bog	-	-	-					
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6	Form LiDen				
5.2	Provinsiope realures	Valley	Bowi/ contained	watercourse	valley	3	1	3	From LiDer				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LIDar				
5.4	valley profile	Steep	⊢lat	Intermediate	Steep Drinking water	3	1	3	FIOM LIDAR				
5.5	Public roade in potential pact flow path	Sensitive	INORI-SENSITIVE	Sensitive	supply	2	1	2	From covial shad	raph: or	a wolk		
5.6	Public roads in potential peat flow path	Local Hoad	No	Local Road	Regional Road	2	1	2	From convict due	ingo and site	e waik		
5.7	Overnead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site	waik		
5.8	Dunuings in potential peat flow path	No	No	⊢arm out-houses	Dwelling	1	1	1	From aerial photog	rapny and sit	e waik		
5.9	capavility to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	based on contracto	iacliities on	site during co	onstruction.	
-	Impact Hating						Total	00			t Socre	See!-	
<u> </u>							Nov Bessible	22		Impac	Norliaiti	Scale	
⊢							wax Possible	33		0.0-0.3	ivegligible		
		1	1	1		1	1	1		0.5-0.5	LOW	2	



<b>ESS</b> International	Peat Stability Risk Assessment Grousemount Wind Farm	Location: Inspected on: Inspected by: Completed by: Date:	T1 Turbine & Hardstanding 2015 ESBI / BLP SS August 2015	-
	T1 Turbine & I	Hardstanding		
Peat depth: <	0.5m => No further assessment required based or	n this depth of pea	at.	

<b>ESS</b> International	Peat Stability Risk Assessment Grousemount Wind Farm	Location: Inspected on: Inspected by: Completed by: Date:	72 Turbine & Hardstanding 2015 ESBI / BLP SS August 2015	-
	T2 Turbine &	Hardstanding		
Peat depth: <	0.5m => No further assessment required based or	n this depth of pea	at.	

				Peat Stab	ilitv Risk A	ssessmer	nt	Location:	T3 Turbine & Hardstanding
	E Internat	iona		Grousem	wet Wind	Form		Inspected on:	2015 ECRI/ PLP
				Grousenn		rann		Completed by:	SS .
								Date:	August 2015
			1	Pating		T3 Tui	bine & Hards	standing	1
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment
			1	1	LIKELIH	OOD			
1.0	Ground Conditions Peat								
1.1	Peat Depth	<1m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.
	Subsoil Characteristics	Boulders /	Gravel/ Firm		Soft Sensitive				
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	bedrock Yes	Glacial Till Yes	Smooth Rock Partially	Clay	1.5	1	1.5	Trial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.
2.0	Topography	100	100	T dittally	110				
	Situation								
2.1	Elevation OD [m]	330m	<200m		>200m	3	1	3	From LiDar
2.2	Slope Aspect Slope Angle	SW	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3º - 7º	2	2	4	From LiDar
	Geomorphology								
2.4	General slope characteristics downslope	Convex	Concave	Planar	Convex	3	1	3	From LiDar
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar
0.0	Hydrology								
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ $3^{\circ}$	3	1	3	From LiDar
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1	From alte wells
3.4	Evidence of piping Evisting drainage ditches	No	No Down clopo	- Variad / Oblique	Yes Across clopp	1	1	1	From site walk
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.
4.0	Other Factors								
	Vegetation								
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north-
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk
	Land Use								
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assumed.
	Likelihood Rating	7 Grannin		Gammer	7 didinin				
							Total	42.5	Likelihood Score Scale
							Max Possible	72	0.0-0.3 Negligible 1
-							Likelihood	0.59	0.5-0.7 Medium 3
									0.7-1.0 High 4
					IMDA	ст.			
5.0	Impact Factors				IMPA				1
5.1	Volume of peat in potential peat flow	Small volume	Small volume	Medium (1.000 -	Potential for Bog	1	3	3	
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar
5.6	Public roads in potential peat flow path	Local Road	No	Local Road	supply Regional Road	2	1	2	From aerial photography and site walk
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk
5.8	Buildings in potential peat flow path	Dwelling	No	Farm out-houses	Dwelling	3	1	3	From aerial photography and site walk
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.
	Impact Hating						Total	21	Impact Score Scale
							Max Possible	33	0.0-0.3 Negligible 1
									0.3-0.5 Low 2
							Impact	0.64	0.5-0.7 Medium 3
-									0.7-1.0 High 4
⊢	<u> </u>	1	I			1	1	1	
					RISK RA	TING			
			Risk Rating =	Likelihood *	Impact				
						T			
			Risk Rating =	0.59	0.64	=	0.38	Significant	
1									
		Risk Rating	Risk Level	Action Required					
1		0.0 - 0.18	Insignificant	Normal SI					
1		0.19 - 0.42	Significant	Targeted SI, design Avoid construction	n of specific mitigati in the area if possib	on measures. Part	time supervision du detailed SI and des	iring construction.	ation measures. Full
1		0.67 - 1 0	Serious	time supervision du Avoid construction	uring construction. in this area.			,	
1									I

<b>ESS</b> International	Peat Stability Risk Assessment Grousemount Wind Farm	Location: Inspected on: Inspected by: Completed by: Date:	T4 Turbine & Hardstanding 2015 ESBI / BLP SS August 2015	-
	T4 Turbine &	Hardstanding		
Peat depth: <	0.5m => No further assessment required based or	n this depth of pea	at.	

				Peat Stab	ilitv Risk A	ssessmer	nt	Location:	T5 Turbine & Hardstanding
	EF Internat	iona		Grousem	ount Wind	Farm		Inspected on: Inspected by:	2015 FSRI / BI P
				al ouconin		- unit		Completed by:	SS August 2015
								Date:	August 2015
			r	Rating		T5 Tui	rbine & Hards	standing	
No.	Likelihood/ Impact Factors	Value	1	2	3	Rating Value	Weighting	Score	Comment
1.0	Ground Conditions		1		LIKELIH	OOD	r	1	1
	Peat								
1.1	Peat Depth	<1m	<1m	>3m	1-3m Extremely Wet/	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.
1.2	Peat Condition in Trial Pits Subsoil Characteristics	Slowly squeezing	Dry/ Stands well	Slowly squeezing	Undiggable	2	1	2	Trial pits carried out by IGSL in 2015.
1.3	Subsoil Type	Soft slightly gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried out by IGSL in 2015.
1.4	Peat fibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried out by IGSL in 2015.
2.0	Topography Situation								
2.1	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar
2.2	Slope Aspect	NW	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar
23	Slope Angle Slope Angle - Ground Surface	2° - > 10°	-9°	× 7º	2° - 7°	3	2	6	From LiDar. Worst case scenario assumed
	Geomorphology	5 - 210	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	21	5-7	-		-	
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar
3.0	Hydrology								
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar
3.2	Distance from head of defined watercourse	200 - 300m	> 300m	200 - 300m Ponded in drains	< 200m Springs/	2	1	2	From LiDar
3.4	Evidence of piping	No	No		Surface Water Yes	1	1	1	From site walk
3.5	Existing drainage ditches	Down slope	Down slope	Varied / Oblique	Across slope	1	1	1	
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.
4.0	Vegetation								
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk
	Land Use								
4.5	Peat Workings Other Factors	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.
	Likelihood Hating						Total	46	Likelihood Score Scale
							Max Possible	72	0.0-0.3 Negligible 1
									0.3-0.5 Low 2
							Likelihood	0.64	0.5-0.7 Medium 3
					IMDA	ст.			
5.0	Impact Factors						T		
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1,000 -	Potential for Bog burst	2	3	6	
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2	
5.6	Public roads in potential peat flow path	No	No Phone Lines	Local Road	Regional Road	1	1	1	From aerial photography and site walk
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.
	Impact Rating						T-4-1		
							Max Possible	33	0.0-0.3 Negligible 1
									0.3-0.5 Low 2
							Impact	0.61	0.5-0.7 Medium 3
⊢								0.71.0 High 4	
		·					·	·	•
					RISK RA	TING			
			Risk Rating =	Likelihood *	Impact				
								-	
			Risk Rating =	0.64	0.61	=	0.39	Significant	
		Risk Rating	Risk Level	Action Required					
1		0.0 - 0.18	Insignificant	Normal SI	n of enceilie'*''	on mossive- D	time europeid-t t	ring construction	
		0.19 - 0.42	Substantial	Avoid construction	in the area if possib	ble. If unavoidable, o	detailed SI and desi	ign of specific mitiga	ation measures. Full
		Avoid construction	in this area.						

(	<b>ESE</b> Internat	I	Peat Stability Risk Assessment Grousemount Wind Farm T6 Turbine & Hardt				Location: Inspected on: Inspected by: Completed by: Date:	T6 Turbine & Han 2015 ESBI / BLP SS August 2015	dstanding		
						T6 Tu	rbine & Hards	standing			
No.	Likelihood/ Impact Factors	Value		Rating		Bating Value	Weighting	Score	Comment		
			1	2	3	000					
1.0	Ground Conditions										
	Peat										
1.1	Peat Depth	0.5m	<1m	>3m	1-3m	1	2	2	Based on peat pro	bes and site investigation carried out by l	GSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried or	ut by IGSL in 2015.	
	Subsoil Characteristics										
1.3	Subsoil Type	gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried or	ut by IGSL in 2015.	
1.4	Peat fibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried or	ut by IGSL in 2015.	
2.0	Topography										
21	Elevation OD [m]	415m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Aspect	SW	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar		
	Slope Angle										
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar		
	Geomorphology										
2.4	General slope characteristics downslope	Concave	Concave	Planar	Convex	1	1	1	From LiDar		
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
3.0	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m	< 200m	1	1	1	From LiDar		
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1			
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Eireann.	. Based on average rainfall from 1985 - 20	J14.
4.0	Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photoc	graphy and site walk	
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	graphy and site walk	
	Slide History										
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological S east of the site in 1	Survey of Ireland. Fuhiry Landslie occurrec 1997 (GSI Event ID #91).	i within 5km north-
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
	Land Use										
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	graphy and site walk	
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	Value assumed.	
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early Summer	Late Summer/	3	1	3	Worst case assum	ned.	
	Likelihood Rating	ridianii		Gammer	/ ddamir						
							Total	40		Likelihood Score Scale	
							Max Possible	72		0.0-0.3 Negligible 1	
							Likelihood	0.50		0.3-0.5 Low 2	
							Likelihood	0.50		0.7-1.0 High 4	
			_		IMPA	СТ		_			
5.0	Impact Factors		Small volume	Morlium	Potential for Box						
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6			
5.2	Downslope features Provimity to defined valley	Valley	Bowl/ contained	watercourse	valley	3	1	3	From LiDar		
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2			
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photog	graphy and site walk	
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site walk	
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	graphy and site walk	
5.9	capability to respond (access and resources)	Good	Good	⊢air	Poor	1	1	1	Based on contract	or raciities on site during construction.	
							Total	20		Impact Score Scale	
							Max Possible	33		0.0-0.3 Negligible 1	
										0.3-0.5 Low 2	
							Impact	0.61		0.5-0.7 Medium 3	
										0.7-1.0 High 4	
					DISK DA	TING					
			Risk Rating =	Likelihood *	Impact						
			Risk Rating =	0.56	0.61	=	0.34	Significant			
		Risk Rating	Risk Level	Action Required						1	
		0.0 - 0.18	Insignificant	Normal SI						1	
		0.19 - 0.42	Significant	Targeted SI, desig	n of specific mitigati	on measures. Part	time supervision du	uring construction.			
		Avoid construction time supervision d	in the area if possit uring construction.	ble. If unavoidable,	detailed SI and des	ign of specific mitiga	tion measures. Full				
		0.67 - 1.0	Serious	Avoid construction	in this area.					1	
1											

	Peat Stability Risk Assessment Location: T7 Turbine & Hardstanding											
	E Internat	ional		Grousem	ount Wind	Farm		Inspected on:	2015 ESBI / BLP			
			•	Grouseind		rann		Completed by:	SS			
								Date:	August 2015			1
						T7 Tui	rbine & Hards	tanding				
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment			
				1	LIKELIH	OOD						
1.0	Ground Conditions											
1.1	Peat Peat Depth	1m	<1m	>3m	1-3m	3	2	6	Based on peat pro	bes and site investigation ca	rried out by I	IGSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried ou	It by IGSL in 2015.		
	Subsoil Characteristics											
1.3	Subsoil Type	bedrock	Glacial Till	Smooth Rock	Clay	1.5	1	1.5	Trial pits carried ou	It by IGSL in 2015.		
1.4 2.0	Pear hores continuous across transition to subsoil	No	Yes	Partially	No	3	1	3	i riai pits carried ou	it by IGSL in 2015.		
	Situation											
2.1	Elevation OD [m]	380m	<200m		>200m	3	1	3	From LiDar			
2.2	Slope Aspect	W	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar			
2.3	Slope Angle - Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar			
	Geomorphology											
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar			
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar			
3.0	Hydrology											
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar			
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar			
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1				
3.4	Evidence of piping Existing drainage ditches	No	No Down slone	- Varied / Oblique	Yes Across slope	1	1	1	From site walk			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on average rainfall fr	om 1985 - 2'	
4.0	Other Factors											
	Vegetation											
4.1	Vegetation Forestry (if applicable)	Grasslands	Dry Heather	Grasslands	Wetlands Stunted Growth	2	1	2	From aerial photog	raphy and site walk		
4.2	Slide History	INA	Good Growin	Fail	Stunied Growth	0	1.5	0	r rom aenai priotog	raphy and site waik		
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological S east of the site in 1	urvey of Ireland. Fuhiry Land 997 (GSI Event ID #91).	slie occurred	d within 5km north-
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk			
4.5	Land Use	None	None	Cuteway/Turkeny	Mashina Cut		1		From parial photos	ranhy and cito walk		
4.5	Other Factors	None	None	Gutaway/Turbary	Machine Out	1		1	r rom aenai priotog	raphy and site waik		
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assumed.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ed.		
							Total	48.5		Likelihood Score	Scale	
							Max Possible	72		0.0-0.3 Negligible	1	
										0.3-0.5 Low	2	
							Likelihood	0.67		0.5-0.7 Medium	4	
												ı
	L											
5.0	Immed Easters	1			IMPA		<u>г</u>	г	r			
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6				
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar		-	
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar			
5.4	Downstream aquatic environment	Steep	Hat Non-sensitive	Sensitive	Steep Drinking water	3	1	3	rom LiDar			
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	1	1	1	From aerial photog	raphy and site walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site walk		
5.9	Impact Rating	Good	G000	Fair	Poor	1	1	1	Based on contract	or facilities on site during con	struction.	
							Total	21		Impact Score	Scale	
							Max Possible	33		0.0-0.3 Negligible	1	
								0.01		0.3-0.5 Low	2	
							Impact	0.64		0.7-1.0 High	4	
L												
					RISK RA	TING						
	Risk Rating = Likelihood * Impact											
			Risk Rating =	0.67	0.64	=	0.43	Substantial				
		Risk Rating	Risk Level	Action Required						Į		
		0.0 - 0.18	Insignificant	Normal SI	a of encoding miticard	on moneyees D-+	timo euponicion -	ring construction				
		0.19 - 0.42	Substantial	Avoid construction	in the area if possib	ble. If unavoidable, o	detailed SI and des	gn of specific mitiga	tion measures. Full			
		0.67 - 1.0	Serious	Avoid construction	in this area.					1		

(	<b>ESB</b> Internat	iona	I	Peat Stab Grousemo	ility Risk A ount Wind	Assessmer Farm	nt	Location: Inspected on: Inspected by: Completed by: Date:	T8 Turbine & Hard 2015 ESBI / BLP SS August 2015	dstanding	
	<u> </u>					T8 Tu	bine & Hards	standing			
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment		
			1	2	3 LIKELIH	OOD	1		I		
1.0	Ground Conditions										
	Peat										
1.1	Peat Depth	0.7m	<1m	>3m	1-3m Extremely Wet/	1	2	2	Based on peat pro	bes and site investigation carried ou	t by IGSL in 2015.
1.2	Peat Condition in Trial Pits Subsoil Characteristics	Stands Well	Dry/ Stands well	Slowly squeezing	Undiggable	1	1	1	I rial pits carried ou	it by IGSL in 2015.	
1.3	Subsoil Type	Soft sandy	Gravel/ Firm	Smooth Rock	Soft Sensitive	3	1	3	Trial pits carried ou	ut by IGSL in 2015.	
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	ut by IGSL in 2015.	
2.0	Topography										
2.1	Situation	400m	~200m		>200m	2	1	2	From LiDar		
2.1	Slope Aspect	N	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar		
	Slope Angle										
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar. Worst	case scenario assumed.	
0.4	Geomorphology	0	0	Discos	0				From LiDor		
2.4	Distance from break in slope	>100m	> 100m	Planar 50-100m	< 50m	3	1	3	From LiDar		
3.0	Hydrology										
	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m Ponded in drains	< 200m Springs/	1	1	1	⊢rom LiDar		
3.4	Evidence of piping	No	No		Surface Water Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Down slope	Down slope	Varied / Oblique	Across slope	1	1	1			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on average rainfall from 198	5 - 2014.
4.0	Other Factors										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photon	ranhy and site walk	
4.1	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site walk	
	Slide History										
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Ireland	
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk		
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photoc	raphy and site walk	
	Other Factors										
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	/alue assumed.	
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ed.	
	Likelihood Rating						Total	44		Likelihood Score Scal	
							Max Possible	72		0.0-0.3 Negligible 1	
										0.3-0.5 Low 2	
							Likelihood	0.61		0.5-0.7 Medium 3	
							-	-		0.7-1.0 High 4	
					IMPA	СТ					
5.0	Impact Factors		Small volume	Madium	Potential for Bos						
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6	From LiDer		
5.3	Proximity to defined valley	>500m	>500m	200-500m	<200m	1	1	1	From LiDar		
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
5.6	Public roads in potential peat flow path	No	No Phone Lines	Local Road	Regional Road	1	1	1	From aerial photog	praphy and site walk	
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwellina	1	1	1	From aerial photod	raphy and site walk	
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contract	or facilities on site during construction	n.
	Impact Rating									· · ·	
							Total	19		Impact Score Scal	Ð
┣—	<u> </u>						Max Possible	33		0.0-0.3 Negligible 1	
							Impact	0.58		0.5-0.7 Medium 3	
										0.7-1.0 High 4	
					BISK BA	TING					
					ANON HA						
	Risk Rating = Likelihood * Impact Risk Rating = 0.61 0.58 = 0.35 Significant										
						• 				T	
		Risk Rating	Risk Level	Action Required						ł	
1		0.19 - 0.42	Significant	Targeted SI, desig	n of specific mitigati	on measures. Part	time supervision du	uring construction.		1	
1		0.43 - 0.66	Substantial	Avoid construction time supervision de	in the area if possib uring construction	ble. If unavoidable, o	detailed SI and des	ign of specific mitiga	tion measures. Full	1	
		0.67 - 1.0	Serious	Avoid construction	in this area.					]	

	Peat Stability Risk Assessment Location: T9 Turbine & Hardstanding										
	Es Internat	ional		Groucom	ount Wind	Form		Inspected on:	2015 ESBL/ BLR		
				Grousenn		rann		Completed by:	SS .		
								Date:	August 2015		
			r			T9 Tui	rbine & Hards	standing	1		
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment		
					LIKELIH	OOD			1		
1.0	Ground Conditions										
1.1	Peat Peat Depth	1.5m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried out by IGSL in 2015.		
	Subsoil Characteristics				Unulgable						
1.3	Subsoil Type	Boulders / bedrock	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	1.5	1	1.5	Trial pits carried out by IGSL in 2015.		
1.4	Peat fibres continuous across transition to subsoil	No	Yes	Partially	No	3	1	3	Trial pits carried out by IGSL in 2015.		
2.0	Situation										
2.1	Elevation OD [m]	380m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Aspect	w	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar		
	Slope Angle		=0	-0	-0 =0	2	2	6	From LiDer, Ward and exercise exercise examined		
2.3	Geomorpholoay	3" - >10"	<3"	>/*	3" - 7"	3	2	0	From Libar, worst case scenario assumed.		
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar		
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
3.0	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m	< 200m	1	1	1	From LiDar		
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1			
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	From Met Éireann, Based on average rainfall from 1985 - 2014		
4.0	Other Factors	y 1400 milityi	croot mitty	1000 1400 1110 1	21400 millight	0		0			
	Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk		
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
	Land Use										
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.		
	Likelihood Rating										
-							Total Max Possible	46.5	Likelihood Score Scale		
							Max Possible	12	0.3-0.5 Low 2		
							Likelihood	0.65	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
					IMPA	СТ					
5.0	Impact Factors										
5.1	Volume of peat in potential peat flow	Medium	<pre>(&lt;1.000m<sup>3</sup>)</pre>	Medium (1,000 - Minor undefined	Potential for Bog burst	2	3	6			
5.2	Downslope features Proximity to defined valley	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar		
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.7	Overnead lines in potential peat flow path Buildings in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk From aerial photography and site walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.		
	Impact Rating										
							Total	20	Impact Score Scale		
							Max Possible	33	0.0-0.3 Negligible 1		
$\vdash$							Impact	0.61	0.5-0.7 Medium 3		
L									0.7-1.0 High 4		
					BICK DA	TING					
					AISK HA						
			Risk Rating =	Likelihood *	Impact						
						T		-			
1			Risk Rating =	0.65	0.61	=	0.39	Significant			
1											
1	I	Risk Rating	Risk Level	Action Required							
1		0.0 - 0.18	Insignificant	Normal SI							
1		0.19 - 0.42	Significant Substantial	argeted SI, design	n of specific mitigati in the area if possib	on measures. Part ble. If unavoidable, o	ume supervision du detailed SI and desi	iring construction. ign of specific mitiga	ition measures. Full		
		0.67 - 1.0	Serious	ume supervision du Avoid construction	in this area.						
1											

<form><form></form></form>		Peat Stability Risk Assessment Location: T10 Turbine & Hardstanding										
<form><form><form><form><form><form><form></form></form></form></form></form></form></form>		E Internat	ional		Grousem	wet Wind	Form		Inspected on:	2015 ECD1/DLD		
UNATION DOTATION NOT AND					Grousenn		rann		Completed by:	SS .		
<th column<="" th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Date:</th><th>August 2015</th></th>	<th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Date:</th> <th>August 2015</th>									Date:	August 2015	
Del non-constrained         Data del non-constrained         Del no-constrained         Del no-constrained </th <th></th> <th></th> <th></th> <th>1</th> <th></th> <th></th> <th>T10 Tu</th> <th>rbine &amp; Hard</th> <th>standing</th> <th></th>				1			T10 Tu	rbine & Hard	standing			
Verture         Note: The second of the second	No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment		
Description       Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>						LIKELIH	OOD					
11       Prime       10.10       10.00       1	1.0	Ground Conditions										
12         Normal	1.1	Peat Depth	1.0 - 1.7m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.		
Image: Section of the section of t	1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.		
10       Note:       1       1       1       1       1       Note:		Subsoil Characteristics		Gravel/ Eirm		Soft Sonsitivo						
110100	1.3	Subsoil Type Peat fibres continuous across transition to subsoil	Silty Sandy Gravel	Glacial Till	Smooth Rock	Clay	1	1	1	Trial pits carried out by IGSL in 2015.		
Image	2.0	Topography	Partialiy	Tes	Fartially	NO	2	1	2			
10       1000      <		Situation										
10       Notioned in the second of the second	2.1	Elevation OD [m]	395m	<200m		>200m	3	1	3	From LiDar		
	2.2	Slope Aspect	NE	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar		
	2.3	Slope Angle - Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar. Worst case scenario assumed.		
10       10m       10m       10m       1 <th1< th="">       1       1       1&lt;</th1<>		Geomorphology										
10       10       10       10       1       1       1       Particle       10	2.4	General slope characteristics downslope	Convex	Concave	Planar	Convex	3	1	3	From LiDar		
	2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
1       1 <th1< th=""> <th1< th=""> <th1< th="">    &lt;</th1<></th1<></th1<>	3.0	Hydrology										
31       2000       1000       <	3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
10     Norma     Longin     Norma     Norma     1 <th1< th=""> <th1<< th=""><th>3.2</th><td>Distance from head of defined watercourse</td><td>&lt; 200m</td><td>&gt; 300m</td><td>200 - 300m</td><td>&lt; 200m</td><td>3</td><td>1</td><td>3</td><td>From LiDar</td></th1<<></th1<>	3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar		
10       No       No <t< th=""><th>3.3</th><th>Surface water</th><th>Localised</th><th>Localised</th><th>Ponded in drains</th><th>Springs/ Surface Water</th><th>1</th><th>1</th><th>1</th><th></th></t<>	3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1			
	3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk		
	3.5	Existing drainage ditches	>1400 mm/vr	<1000 mm/vr	Varied / Oblique	>1400 mm/vr	2	1	2	From Met Éireann, Based on average rainfall from 1985 - 2014		
NomeN	4.0	Other Factors										
41     Norm     Conv     Opport     Sinth     2     1     2     Norm     Market property set it		Vegetation										
	4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
	4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk		
4.16.17.07	4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland		
No       No <t< th=""><th>4.4</th><th>Evidence of movement in peat (e.g. tension cracks, step features, compression features)</th><th>No</th><th>No</th><th>-</th><th>Yes</th><th>1</th><th>1</th><th>1</th><th>From site walk</th></t<>	4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
		Land Use										
	4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
1         1         3         1         3         No         Source           1         3         1         3         No         Source           1         1         3         No         Source         Mathem         Mathm         Mathm	4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.		
Image: problem into the	4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.		
Image: Section of the sectin of the section of the section of th		Likelihood Rating										
Image: Section of the sectin of the section of the section								Total Max Possible	49	Likelihood Score Scale		
Image: Section of the secting of the secting of the secting of t								max r obbibie	12	0.3-0.5 Low 2		
Induction     Induction     Induction     Induction     Induction     Induction     Induction       1     Induction     <								Likelihood	0.68	0.5-0.7 Medium 3		
Image: Second	-									0.7-1.0 High 4		
Image: Second		<u>I</u>										
80     80     80     80     80     80     80     80     80     80     80     80     80     80       61     90     90     100 <th></th> <th></th> <th></th> <th></th> <th></th> <th>IMPA</th> <th>СТ</th> <th></th> <th></th> <th></th>						IMPA	СТ					
0     New operation preserve performance of the second of th	5.0	Impact Factors		Small volume	Mada	Datastist (s. Das						
a         owning waterware         Variety         owning waterware         Variety         out	5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6	From LiDer		
1         1	5.2	Proximity to defined valley	Valley 200-500m	>500m	watercourse 200-500m	<200m	3	1	2	From LiDar		
5.5     Downstream aqualic environment     Sensitive     Non-sensitive     Sensitive     Density evalue     2     1     2       6.6     Relace rads in potentid pat flow path     No     No     Local Raid     No     1     1     From avrial photography and site watk.       6.7     Denhedin to potentil pat flow path     No     Prome Inves     Eventorial vector path     1     1     From avrial photography and site watk.       6.8     Bulding in potentil pat flow path     No     Prome Inves     Eventorial vector path     1     1     From avrial photography and site watk.       6.9     Depathelin to regord (access and resources)     Good     Good     Fair     Poor     1     1     1     Bade on contractor facilities on steatures       6.9     Capability to regord (access and resources)     Good     Good     Fair     Poor     1     1     1     Bade on contractor facilities on steatures       6.0     Contract Railing     Contract Rai	5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar		
9.6     Paile rada in potentio path (mo path)     No     Load Roa     1     1     1     Finane pathogone/ mode was in the pathogone/ was interval was in	5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
0.         Overmean uses an poentage and requires         100         Prioritize and requires         100         Prioritize and requires         100         1 <th1< th=""> <th1< th="">         1         <th< th=""><th>5.6</th><th>Public roads in potential peat flow path</th><th>No</th><th>No</th><th>Local Road</th><th>Regional Road</th><th>1</th><th>1</th><th>1</th><th>From aerial photography and site walk</th></th<></th1<></th1<>	5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
n         n	5.7	Overnead lines in potential peat flow path Buildings in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk From aerial photography and site walk		
Impact Rating         Impact Rating         Impact Rating         Impact Rating         Impact Rating         Impact Rating         Respective Ration         Scale           Impact Rating	5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.		
Image       Image <th< th=""><th></th><th>Impact Rating</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>		Impact Rating										
Image: state of the state	-							Total	20	Impact Score Scale		
Image         Image <th< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Max Possible</th><th>33</th><th>0.0-0.3 Negligible 1</th></th<>								Max Possible	33	0.0-0.3 Negligible 1		
Image: second	-							Impact	0.61	0.5-0.7 Medium 3		
Risk Rating = Likelihood ' Impact         Risk Rating =       Likelihood ' Impact         Risk Rating =       0.68       0.61       =       0.41       Significant         Risk Rating =       0.68       0.61       =       0.41       Significant         Normal S1       0.19 - 0.42       Significant       Targeted SI, design of specific mitigation measures. Part time supervision during construction.       0.43 - 0.66       Substantial       Avoid construction in the area.       Facilities of specific mitigation measures. Full time supervision during construction.         0.67 - 1.0       Sereau       Avoid construction in this area.       Facilities area.										0.7-1.0 High 4		
Risk Rating = Likelihood ' Impact         Risk Rating =       Likelihood ' Impact         Risk Rating =       0.68       0.61       =       0.41       Significant         Normal S1       0.19 - 0.42       Significant       Targeted SI, design of specific mitigation measures. Part time supervision during construction.       Avoid construction in the area if possible. If unavoidable, detailed SI and design of specific mitigation measures. Full time supervision during construction.         0.47 - 1.0       Serecut       Avoid construction in this area.												
Risk Rating =     Likelihood * Impact       Risk Rating =     0.68       0.61     =       0.41     Significant       0.0 - 0.18     Insignificant       0.19 - 0.42     Significant       0.43 - 0.65     Substantial       Avoid construction in the area.     Avoid construction in this area.						BISK PA	TING					
Risk Rating     Likelihood* Impact       Risk Rating     0.68     0.61     =     0.41     Significant       Risk Rating     Risk Level     Action Required     =     0.41     Significant       0.0 - 0.18     Insignificant     Normal SI     =     0.41     Significant       0.19 - 0.42     Significant     Targeted SI, design of specific mitigation measures. Part time supervision during construction.     0.43 - 0.66     Substantial       0.43 - 0.66     Substantial     Avoid construction in the area If possible. If unavoidable, detailed SI and design of specific mitigation measures. Full time supervision during construction.     0.67 - 1.0       0.67 - 1.0     Sensor     Avoid construction in this area.						HIGITIA						
Risk Rating     Risk Level     Action Required     =     0.41     Significant       No.0.0.18     Insignificant     Normal SI          0.19 - 0.42     Significant     Targeted SI, design of specific mitigation measures. Part time supervision during construction.        0.43 - 0.66     Substantial     Avoid construction in the area If possible. If unavoidable, detailed SI and design of specific mitigation measures. Full time supervision during construction.       0.67 - 1.0     Sereau     Avoid construction in this area.				Risk Rating =	Likelihood *	Impact						
Hisk Hating     Risk Level     Action Required     =     0.41     Significant       0.0 - 0.18     Insignificant     Normal SI       0.19 - 0.42     Significant     Targeted SI, design of specific mitigation measures. Part time supervision during construction.       0.43 - 0.66     Substantial     Avoid construction in the area if possible. If unavoidable, detailed SI and design of specific mitigation measures. Full       0.67 - 1.0     Serious     Avoid construction in this area.							T					
Risk Rating         Risk Level         Action Required           0.0 - 0.18         Insignificant         Normal SI           0.19 - 0.42         Significant         Targeted SI, design of specific mitigation measures. Part time supervision during construction.           0.43 - 0.66         Substantial         Avoid construction in the area if possible. If unavoidable, detailed SI and design of specific mitigation measures. Full time supervision during construction.           0.67 - 1.0         Serous         Avoid construction in this area.	1			HISK Rating =	0.68	0.61	-	0.41	Significant			
Risk Rating         Risk Level         Action Required           0.0 - 0.18         Insignificant         Normal SI           0.19 - 0.42         Significant         Targeted SI, design of specific mitigation measures. Part time supervision during construction.           0.43 - 0.66         Substantial ime supervision during construction.         Avoid construction in the area if possible. If unavoidable, detailed SI and design of specific mitigation measures. Full time supervision during construction.           0.67 - 1.0         Serious         Avoid construction in this area.	1											
0.0 - 0.18     Insignificant     Normal SI       0.19 - 0.42     Significant     Targeted SI, design of specific mitigation measures. Part time supervision during construction.       0.43 - 0.66     Substantial     Avoid construction in the area if possible. If unavoidable, detailed SI and design of specific mitigation measures. Full time supervision during construction.       0.67 - 1.0     Serious     Avoid construction in this area.	1		Risk Rating	Risk Level	Action Required							
0.19 - 0.42     Significant 1 argeted 53, design 0.43 - 0.66     The supervision during construction.       0.43 - 0.66     Substantial Substantial 0.67 - 1.0     Notice of the supervision during construction.       0.67 - 1.0     Sendual Avoid construction in the area.	1		0.0 - 0.18	Insignificant	Normal SI	n of one-We - 11		time out and the t	vian and the st			
ume supervision during construction.           0.67 - 1.0         Sanous         Avoid construction in this area.	1		0.19 - 0.42	Significant	Avoid construction	in the area if possib	on measures. Part ble. If unavoidable, o	detailed SI and desi	ign of specific mitiga	tion measures. Full		
· · · · · · · · · · · · · · · · · · ·			0.67 - 1.0	Serious	Avoid construction	in this area.						

Peat Stability Risk Assessment Lecation: T11 Turbine & Hardstanding									
	E Internat	ional		Grousem	ount Wind	Farm		Inspected on: Inspected by:	2015 FSBL/ BLP
				arousenn		i ann		Completed by:	SS August 2015
								Date:	August 2015
			1			T11 Tu	rbine & Hard	standing	
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment
					LIKELIH	OOD			
1.0	Ground Conditions								
1.1	Peat Depth	0.8m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.
	Subsoil Characteristics	Caltaandu	Craval/ Eirm		Colt Consilius				
1.3	Subsoil Type	gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried out by IGSL in 2015.
2.0	Topography	Partiality	Tes	Fartially	NO	2	-	2	
	Situation								
2.1	Elevation OD [m]	400m	<200m		>200m	3	1	3	From LiDar
2.2	Slope Aspect	SW	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar
2.3	Slope Angle - Ground Surface	0° - 5°	<3°	>7°	3° - 7°	3	2	6	From LiDar
	Geomorphology								
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar
0.0	Hydrology								
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < $3^{\circ}$	Yes, slopes ≥ 3°	3	1	3	From LiDar
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m	< 200m Springs/	1	1	1	From LiDar
3.3	Surrace water Evidence of piping	Localised	Localised	Ponded in drains	Surface Water Yes	1	1	1	From site walk
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.
4.0	Other Factors								
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk
	Slide History								
4.3	Previous slides in locality Evidence of movement in peat (e.g. tension cracks, step	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland
4.4	teatures, compression features) Land Use	110	110		100				
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk
4.6	Other Factors	Solid Pood	Solid Road		Electing Road	1	1	1	No ovisting road. Value assumed
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assumed.
	Likelihood Rating								
-							Total Max Passible	42	Likelihood Score Scale
							max r obbibie	12	0.3-0.5 Low 2
							Likelihood	0.58	0.5-0.7 Medium 3
									0.7-1.0 High 4
								1	
					IMPA	ст	-		1
5.0	Impact Factors	Modium	Small volume	Medium	Potential for Bog	2	2	6	
5.2	Downslope features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	burst Valley	3	1	3	From LiDar
5.3	Proximity to defined valley	>500m	>500m	200-500m	<200m	1	1	1	From LiDar
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar
5.5	Downstream aquatic environment Public roads in potential peat flow path	Sensitive	Non-sensitive	Sensitive Local Road	supply Regional Road	2	1	2	From aerial photography and site walk
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	. 1	1	1	From service drawings and site walk
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.
	Impose natility						Total	19	Impact Score Scale
							Max Possible	33	0.0-0.3 Negligible 1
F									0.3-0.5 Low 2
<u> </u>							Impact	0.58	0.5-0.7 Medium 3
					DIOV P	TING			
					RISK RA	Inng			
			Risk Rating =	Likelihood *	Impact				
			Risk Rating =	0.58	0.58	=	0.34	Significant	
						1			
		Risk Rating	Risk Level	Action Required					
		0.0 - 0.18	Insignificant	Normal SI					
		0.19 - 0.42	Significant Substantial	Largeted SI, design Avoid construction	n of specific mitigati in the area if possib	on measures. Part	time supervision du detailed SI and desi	iring construction. ign of specific mitiga	tion measures. Full
		0.67 - 1.0	Serious	time supervision du Avoid construction	in this area.				



Grousemount Wind Farm

Location:	T12 Turbine & Hardstanding
Inspected on:	2015
Inspected by:	ESBI / BLP
Completed by:	SS
Date:	August 2015

T12 Turbine & Hardstanding

Peat depth: < 0.5m => No further assessment required based on this depth of peat.

(	<b>ESB</b> Internat	I	Peat Stability Risk Assessment Grousemount Wind Farm				Location: Inspected on: Inspected by: Completed by: Date:	T13 Turbine & Har 2015 ESBI / BLP SS August 2015	rdstanding	-	
	г	1				T13 Tu	rhine & Hard	etandina			
No	l italihaad (Immast Fastara	Velue		Rating		Poting Volue	Weighting	Scano	Commont		
140.		Value	1	2	3		weighting	30018	Comment		
1.0	Ground Conditions				LIKELIH						
	Peat										
1.1	Peat Depth	0.5-1m	<1m	>3m	1-3m	3	2	6	Based on peat prot	pes and site investigation carried out b	y IGSL in 2015.
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried ou	t by IGSL in 2015.	
	Subsoil Characteristics		Gravel/ Firm		Soft Sensitive						
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	Sandy gravelly silt	Glacial Till	Smooth Hock Partially	Clay	3	1	3	Trial pits carried ou	t by IGSL in 2015.	
2.0	Topography	T ditidily	165	1 artially	140	2		2		N BY IGOL IN 2010.	
	Situation										
2.1	Elevation OD [m]	490m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Aspect	NW	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar		
	Slope Angle		-0	-	-0 -0	2	0		From LiDor, Wordt	anna annaria annumad	
2.5	Geomorphology	3 ->10	<3	>/	3 - 7	5	-	0	TION EIDar. Worst	case scenario assumed.	
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar		
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
3.0	Hydrology										
	Hydrology	Van dere er en	No	Van dere få	Van dere er	2	4	2	From LiDer		
3.1	In broad valley upslope from defined watercourse Distance from head of defined watercourse	Yes, slopes ≥ 3° S300m	N0	Yes, slopes < 3° 200 - 300m	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1			
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on average rainfall from 1985 -	2014.
4.0	Other Factors										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site walk	
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site walk	
	Slide History										
4.3	Previous slides in locality	< 5km	> 5km	< 5km	On site	2	2	4	From Geological Si east of the site in 1	urvey of Ireland. Fuhiry Landslie occuri 997 (GSI Event ID #91).	red within 5km north-
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No		Yes	1	1	1	From site walk		
4.5	Land Use Peat Workings	Nono	Nono	Cutaway/Turbany	Machina Cut	1	1	1	From aerial photog	raphy and site walk	
4.5	Other Factors	None	None	Gutaway/Turbary	Machine Out				i tom dona priotog	raphy and one train	
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assumed.	
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assume	ed.	
_	Likelihood Rating									Г I	-
							Total Max Bassible	50		Likelihood Score Scale	
							Max Possible	12		0.3-0.5 Low 2	
-							Likelihood	0.69		0.5-0.7 Medium 3	
										0.7-1.0 High 4	
					INIDA	OT					
5.0	Impact Factors				INFA			1			
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium (1.000 -	Potential for Bog	2	3	6			
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar		
5.3	Proximity to defined valley	>500m	>500m	200-500m	<200m	1	1	1	From LiDar		
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar		
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Board	1	1	1	From aerial photog	raphy and site walk	
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawi	ngs and site walk	
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site walk	
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on site during construction.	
_	Impact Rating									Г — П	-
							Total	19		Impact Score Scale	_
-							Max Possible	33		0.3-0.5 Low 2	
-							Impact	0.58		0.5-0.7 Medium 3	
										0.7-1.0 High 4	
					DIOK DA	TINO					
			Risk Rating =	Likelihood *	Impact	TING					
			Risk Rating =	0.69	0.58	=	0.40	Significant			
		0		Antiny Dec.						r	
		Risk Rating	Risk Level	Normal SI							
1		0.19 - 0.42	Significant	Targeted SI. desig	n of specific mitigati	on measures. Part	time supervision du	uring construction.			
1		0.43 - 0.66	Substantial	Avoid construction time supervision d	in the area if possib uring construction	ble. If unavoidable,	detailed SI and des	ign of specific mitiga	tion measures. Full		
1		0.67 - 1.0	Serious	Avoid construction	in this area.			-		l	
1											



Grousemount Wind Farm

Location:	T14 Turbine & Hardstanding
Inspected on:	2015
Inspected by:	ESBI / BLP
Completed by:	SS
Date:	August 2015

T14 Turbine & Hardstanding

Peat depth: < 0.5m => No further assessment required based on this depth of peat.

	Peat Stability Risk Assessment										
	E Internat	ional		Grousem	wet Wind	Form		Inspected on:	2015 ECRI/RI D		
				Grousenn		rann		Completed by:	SS		
								Date:	August 2015		
			1			T15 Tu	rbine & Hard	standing			
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment		
		1	1		LIKELIH	OOD	1				
1.0	Ground Conditions Peat										
1.1	Peat Depth	1.2m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.		
	Subsoil Characteristics	Soft sandy	Gravel/ Firm	Orecette Develo	Soft Sensitive				Tala ala anala ante 1001 la 2015		
1.3	Peat fibres continuous across transition to subsoil	gravelly silt Partially	Glacial Till Yes	Partially	Clay No	2	1	2	Trial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.		
2.0	Topography										
	Situation										
2.1	Elevation OD [m] Slope Aspect	450m NW	<200m SW. S. SE	W.E	>200m NW. N. NE	3	1	3	From LiDar From LiDar		
	Slope Angle			,							
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar		
2.4	Geomorphology	Disper	Canadia	Disper	Conver			2	From LiDer		
2.4	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
3.0	Hydrology										
<u>.</u>	Hydrology	No. 1	A1-	No. 1	No. 1				From LiDer		
3.1	In broad valley upslope from defined watercourse Distance from head of defined watercourse	Yes, slopes ≥ 3° 200 - 300m	No > 300m	Yes, slopes < 3° 200 - 300m	Yes, slopes ≥ 3° < 200m	3	1	3	From LiDar		
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1			
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	From Met Éireann, Based en average rainfall from 1995 - 2014		
4.0	Other Factors	>1400 milliyi	Crooo mintyr	1000-1400 1111/91	>1400 mmbyr	5		5	i forn wei Eireann. Dased on average fainiai noin 1300 - 2014.		
	Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
4.2	Forestry (if applicable) Slide History	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk		
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
4.5	Land Use	News	News	O de la Tarban	Marking Oct				From parial shatewashu and alte well.		
4.5	Other Factors	None	None	Cutaway/Turbary	Machine Gut	1	1	1			
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.		
	Likelinood Rating						Total	47	Likelihood Score Scale		
							Max Possible	72	0.0-0.3 Negligible 1		
									0.3-0.5 Low 2		
							Likelihood	0.65	0.5-0.7 Medium 3 0.7-1.0 High 4		
5.0	Impact Factors				IMPAG		1	1			
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium (1.000 -	Potential for Bog	2	3	6			
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar		
5.3	Proximity to defined valley	200-500m	>500m	200-500m	<200m Stoop	2	1	2	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2			
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk		
5.8 5.9	Buildings in potential peat flow path Capability to respond (access and resources)	No Good	No Good	Farm out-houses	Dwelling Poor	1	1	1	Prom aerial photography and site walk Based on contractor facilities on site during construction.		
	Impact Rating										
							Total	20	Impact Score Scale		
<u> </u>							Max Possible	33	0.0-0.3 Negligible 1		
<u> </u>							Impact	0.61	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
					RISK RA	TING					
			Risk Rating =	Likelihood *	Impact						
			Bick Boting	0.65	0.61	Ι	0.40	Cignificant			
1			ніяк Hating =	0.65	0.61	1 =	0.40	Significant			
1											
1		Risk Rating	Risk Level	Action Required							
1		0.19 - 0.42	Insignificant Significant	Targeted SI. design	n of specific mitigati	on measures. Part	time supervision du	ring construction.			
1		0.43 - 0.66	Substantial	Avoid construction time supervision de	in the area if possib uring construction	ble. If unavoidable, o	detailed SI and desi	ign of specific mitiga	tion measures. Full		
1		0.67 - 1.0	Serious	Avoid construction	in this area.						

(	<b>ESB</b> Internat	iona	I	Peat Stab Grousemo	ility Risk A ount Wind	Assessmer Farm	nt	Location: Inspected on: Inspected by: Completed by: Date:	T16 Turbine & Hai 2015 ESBI / BLP SS August 2015	rdstanding	
		1				T16 Tu	rhine & Hard	etanding			
No.	Likelihood/ Impact Factors	Value		Rating		Rating Value	Weighting	Score	Comment		
			1	2	3 LIKELIH	OOD					
1.0	Ground Conditions								1		
	Peat										
1.1	Peat Depth	0.7m	<1m	>3m	1-3m Extremely Wet/	1	2	2	Based on peat prot	bes and site investigation carried o	It by IGSL in 2015.
1.2	Subsoil Characteristics	Stands well	Dry/ Stands well	Slowly squeezing	Undiggable	1	1	I	That pits carried ou	it by 163E 11 2013.	
1.3	Subsoil Type	Soft to firm sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clav	3	1	3	Trial pits carried ou	t by IGSL in 2015.	
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried ou	t by IGSL in 2015.	
2.0	Topography										
2.1	Elevation OD [m]	410m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar		
	Slope Angle										
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar		
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar		
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
3.0	Hydrology										
2.1	Hydrology	Van dere er er	hla	Vee class = **	Vee dealers in the	0		3	From LiDer		
3.1	Distance from head of defined watercourse	res, slopes ≥ 3° < 200m	> 300m	res, slopes < 3º 200 - 300m	res, slopes ≥ 3° < 200m	3	1	3	From LiDar		
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1	L		
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	From Mark Élevano	Development of the second	
3.6	Other Factors	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Eireann.	Based on average rainfall from 19	35 - 2014.
	Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photog	raphy and site walk	
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site walk	
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological S	urvey of Ireland	
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
	Land Use										
4.5	Peat Workings Other Factors	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site walk	
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. V	alue assumed.	
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assum	ed.	
	Likelihood Rating						Tatal	42		Likelihaad Seera See	<b>1</b>
							Max Possible	72		0.0-0.3 Negligible 1	
										0.3-0.5 Low 2	
							Likelihood	0.58		0.5-0.7 Medium 3	
										0.7-1.0 High 4	
		1	1	1		1					
					IMPA	СТ			1		
5.0	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6			
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar		
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar		
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar		
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	- 1	1	- 1	From aerial photog	raphy and site walk	
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service draw	ings and site walk	
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site walk	-
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	or facilities on site during constructi	on.
							Total	21		Impact Score Sca	le
							Max Possible	33		0.0-0.3 Negligible 1	
<u> </u>										0.3-0.5 Low 2	
							Impact	0.64		0.5-0.7 Medium 3 0.7-1.0 High 4	
L											
					DIOV P	TING					
_					HISK RA	IING					
	Risk Rating = Likelihood ' Impact Risk Rating = 0.58 0.64 = 0.37 Significant										
						• 				T	
		Risk Rating	Risk Level	Action Required						ł	
1		0.19 - 0.42	Significant	Targeted SI, desig	n of specific mitigati	on measures. Part	time supervision du	uring construction.			
		0.43 - 0.66	Substantial	Avoid construction time supervision du	in the area if possib uring construction.	ble. If unavoidable, o	detailed SI and des	ign of specific mitiga	tion measures. Full		
		0.67 - 1.0	Serious	Avoid construction	in this area.					l	

	Peat Stability Risk Assessment Location: T17 Turbine & Hardstanding										
	<b>Internat</b>	iona		Grousem	ount Wind	Farm		Inspected on:	2015 ESDI/DI D		
				Grousenn		rann		Completed by:	SS		
								Date:	August 2015		
			1	Bating		T17 Tu	rbine & Hard	standing	1		
No.	Likelihood/ Impact Factors	Value	1	2	3	Rating Value	Weighting	Score	Comment		
1.0	Ground Conditions				LIKELIH	OOD					
	Peat										
1.1	Peat Depth	1.2m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits Subsoil Characteristics	Slowly squeezing	Dry/ Stands well	Slowly squeezing	Undiggable	2	1	2	Trial pits carried out by IGSL in 2015.		
1.3	Subsoil Type	Soft sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clav	3	1	3	Trial pits carried out by IGSL in 2015.		
1.4	Peat fibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried out by IGSL in 2015.		
2.0	Topography										
2.1	Elevation OD [m]	460m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar		
2.2	Slope Angle		<b>0</b> <sup>0</sup>		o <sup>0</sup> 70	2	2	4	From LiDar		
2.0	Geomorphology	>/*	<3	>/	3 - 7	2	2	4	i fon Eba		
2.4	General slope characteristics downslope	Convex	Concave	Planar	Convex	3	1	3	From LiDar		
2.5	Distance from break in slope	50-100m	> 100m	50-100m	< 50m	2	1	2	From LiDar		
3.0	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < $3^{\circ}$	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m Springs/	3	1	3	From LiDar		
3.3 3.4	Surrace water Evidence of piping	Localised	Localised	Ponded in drains	Surface Water Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.		
4.0	Other Factors Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk		
4.3	Slide History Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
	Land Use										
4.5	Peat Workings Other Factors	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.		
	Likelihood Rating						Total	48	Likelihood Score Scale		
							Max Possible	72	0.0-0.3 Negligible 1		
									0.3-0.5 Low 2		
							Likelihood	0.67	0.5-0.7 Medium 3		
					1840 4	07					
5.0	Impact Factors				IMPAG						
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1,000 -	Potential for Bog burst	2	3	6			
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar		
5.3	Valley profile	<200m Steep	>500m Flat	200-500m Intermediate	<200m Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.7 5.8	Overnead lines in potential peat flow path Buildings in potential peat flow path	No	Phone Lines No	Electricity, LV Farm out-houses	Electricity MV, HV	1	1	1	From service drawings and site walk From aerial photography and site walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.		
	Impact Rating										
							l otal Max Possible	33	0.0-0.3 Negligible 1		
									0.3-0.5 Low 2		
							Impact	0.64	0.5-0.7 Medium 3		
⊢	<u> </u>							-	U.7-1.0 High 4		
	L	I	I		I	I	I	ı	I		
					RISK RA	TING					
			Risk Rating =	Likelihood *	Impact						
						_		_			
			Risk Rating =	0.67	0.64	=	0.42	Significant			
1		Risk Rating	Risk Level	Action Required							
1		0.0 - 0.18	Insignificant	Normal SI	n of energilie	on mossive- D	time europeid-t t	ring construction			
1		0.19 - 0.42	Substantial	Avoid construction	in the area if possib uring construction	ble. If unavoidable, o	detailed SI and desi	ign of specific mitiga	tion measures. Full		
1		0.67 - 1.0	Serious	Avoid construction	in this area.						

	Peat Stability Risk Assessment Location: T18 Turbine & Hardstanding										
	Es Internat	ional		Groucom	ount Wind	Form		Inspected on:	2015 ESBL/BLR		
				Grousenn		rann		Completed by:	SS .		
								Date:	August 2015		
			r			T18 Tu	rbine & Hard	standing	1		
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment		
					LIKELIH	OOD			1		
1.0	Ground Conditions										
1.1	Peat Peat Depth	0.6m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried out by IGSL in 2015.		
	Subsoil Characteristics	<u>.</u>									
1.3	Subsoil Type	gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried out by IGSL in 2015.		
1.4	Peat tibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried out by IGSL in 2015.		
2.0	Situation										
2.1	Elevation OD [m]	410m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Aspect	E	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar		
2.3	Slope Angle Slope Angle - Ground Surface	×7º	-0°	×7°	2° . 7°	2	2	4	From LiDar		
2.0	Geomorphology	>1	<3	>/	3 - 7	-	-				
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar		
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
3.0	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Distance from head of defined watercourse	>300m	> 300m	200 - 300m	< 200m	1	1	1	From LiDar		
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1			
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk		
3.5	Existing drainage ditches Annual Bainfall	>1400 mm/vr	<1000 mm/vr	Varied / Oblique	>1400 mm/vr	2	1	2	From Met Éireann, Based on average rainfall from 1985 - 2014.		
4.0	Other Factors										
	Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk		
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
	Land Use										
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.		
	Likelihood Rating										
							Total Max Possible	40	Likelihood Score Scale		
									0.3-0.5 Low 2		
							Likelihood	0.56	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
	<u> </u>										
					IMPA	СТ					
5.0	Impact Factors		Small volumo	Madium	Detential (or Deg						
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6	From LiDer		
5.3	Proximity to defined valley	>500m	>500m	200-500m	<200m	1	1	1	From LiDar		
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
5.6	Public roads in potential peat flow path	No	No Phone Lines	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.		
	Impact Rating										
┣—							Total Max Possible	19	Impact Score Scale		
$\vdash$							max r'ussible		0.3-0.5 Low 2		
							Impact	0.58	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
⊢	<u> </u>										
					RISK RA	TING					
			Risk Rating =	Likelihood *	Impact						
			Bisk Bating -	0.56	0.58	_	0.32	Significant			
1				0.30	0.30	1 -	0.02	Significant			
1		Risk Rating	Risk Level	Action Required							
		0.0 - 0.18	Insignificant	Targeted SJ design	n of specific mitigati	on measures Part	time supervision du	ring construction			
1		0.43 - 0.66	Substantial	Avoid construction	in the area if possib	ble. If unavoidable,	detailed SI and desi	ign of specific mitiga	tion measures. Full		
1		0.67 - 1.0	Serious	Avoid construction	in this area.						

		Peat Stability Risk Assessment Grousemount Wind Farm	Location:     T19 Turbine & Hardstanding       Inspected on:     2015       Inspected by:     ESBI / BLP       Completed by:     SS       Date:     August 2015
T19 Turbine & Hardstanding			

		T20 Turbine & Hardstanding								
	E Internat	Grousem	wet Wind	Form		Inspected on:	2015 ECD1/DLD			
				Grousenn		rann		Completed by:	SS .	
							August 2015			
			1			T20 Tu	rbine & Hard	standing		
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment	
		1	1		LIKELIH	OOD	1		1	
1.0	Ground Conditions Peat									
1.1	Peat Depth	0.5m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.	
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.	
	Subsoil Characteristics	Soft sandy	Gravel/ Firm	Orecette Develo	Soft Sensitive				Tala da contra contra 1001 de 2005	
1.3	Peat fibres continuous across transition to subsoil	gravelly silt Partially	Glacial Till Yes	Partially	Clay No	2	1	2	Trial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.	
2.0	Topography									
	Situation									
2.1	Elevation OD [m] Slope Aspect	370m SE	<200m SW_S_SE	WF	>200m	3	1	3	From LiDar From LiDar	
	Slope Angle	02	011, 0, 02							
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar	
	Geomorphology	Discos	0	Discos	0				From LiDer	
2.4	Distance from break in slope	>100m	> 100m	Planar 50-100m	< 50m	2	1	2	From LiDar From LiDar	
3.0	Hydrology									
	Hydrology									
3.1	In broad valley upslope from defined watercourse Distance from head of defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar From LiDar	
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/	1	1	1		
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk	
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2		
3.6	Annual Rainfall Other Factors	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Eireann. Based on average rainfall from 1985 - 2014.	
	Vegetation									
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk	
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk	
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland	
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk	
	Land Use									
4.5	Peat Workings Other Factors	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk	
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.	
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.	
	Likelihood Rating						Total	42	Likelihood Score Scale	
							Max Possible	72	0.0-0.3 Negligible 1	
									0.3-0.5 Low 2	
							Likelihood	0.58	0.5-0.7 Medium 3	
									0.7-1.0 High 4	
	1	1	1			1	1	1	1	
		1	1		IMPAG	СТ	1		1	
5.0 5.1	Impact Factors Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6		
5.2	Downslope features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined watercourse	burst Valley	3	1	3	From LiDar	
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar	
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar	
5.6	Public roads in potential peat flow path	No	No No	Local Road	supply Regional Road	1	1	1	From aerial photography and site walk	
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk	
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk	
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.	
							Total	21	Impact Score Scale	
							Max Possible	33	0.0-0.3 Negligible 1	
							Imnoct		0.3-0.5 Low 2	
<u> </u>							impact	0.64	0.7-1.0 High 4	
						7010				
					RISK RA	TING				
			Risk Rating =	Likelihood *	Impact					
Risk Rating = 0.58 0.64 = 0.37 Significant										
1										
1		Risk Rating	Risk Level	Action Required						
1		0.0 - 0.18	Insignificant	Normal SI						
1		0.19 - 0.42	Significant	Targeted SI, design Avoid construction	n of specific mitigati in the area if possib	on measures. Part ble. If unavoidable.	time supervision du detailed SI and desi	iring construction. ign of specific mitiga	ition measures. Full	
1		0.43 - 0.66	Serious	time supervision du Avoid construction	in this area.					
		•		•						
1										

Peat Stability Risk Assessment											
	<b>Internat</b>	Grousem	wet Wind	Form		Inspected on:	2015 ECRI/RI D				
				Grousenne		rann		Completed by:	SS		
		-						Date:	August 2015		
			1	Bating		T21 Tu	rbine & Hard	standing	1		
No.	Likelihood/ Impact Factors	Value	1	2	3	Rating Value	Weighting	Score	Comment		
1.0	Ground Conditions				LIKELIH	OOD					
	Peat										
1.1	Peat Depth	0.5m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.		
1.3	Subsoil Type	Soft sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clav	1	1	1	Trial pits carried out by IGSL in 2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried out by IGSL in 2015.		
2.0	Topography										
2.1	Elevation OD [m]	350m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar		
2.2	Slope Angle	79	<b>0</b> <sup>0</sup>	~	o <sup>0</sup> 70	2	2	4	From LiDar		
2.0	Geomorphology	>/	<3	>/	3 - 7	2	2	4	i fon Eba		
2.4	General slope characteristics downslope	Convex	Concave	Planar	Convex	3	1	3	From LiDar		
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
3.0	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < $3^{\circ}$	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m Springs/	3	1	3	From LiDar		
3.3	Surrace water Evidence of piping	Localised	Localised	Ponded in drains	Surface Water Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Across slope	Down slope	Varied / Oblique	Across slope	3	1	3			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.		
4.0	Other Factors Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk		
4.3	Slide History Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
	Land Use										
4.5	Peat Workings Other Factors	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.		
	Likelihood Rating						Total	42	Likelihood Score Scale		
							Max Possible	72	0.0-0.3 Negligible 1		
									0.3-0.5 Low 2		
							Likelihood	0.58	0.5-0.7 Medium 3		
					1840 4	07					
5.0	Impact Factors				IMPAG						
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1,000 -	Potential for Bog burst	2	3	6			
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar		
5.3	Valley profile	<200m Steep	>500m Flat	200-500m Intermediate	<200m Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
5.6	Public roads in potential peat flow path	No	No Phone L'	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.7 5.8	Buildings in potential peat flow path	No	Prione Lines No	Electricity, LV Farm out-houses	Dwelling	1	1	1	From service drawings and site walk From aerial photography and site walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.		
	Impact Rating										
							l otal Max Possible	33	0.0-0.3 Negligible 1		
									0.3-0.5 Low 2		
							Impact	0.64	0.5-0.7 Medium 3		
┣—									U.7-1.0 High 4		
		·	ı		I	I	I	ı	I		
					RISK RA	TING					
			Risk Rating =	Likelihood *	Impact						
			Risk Rating =	0.58	0.64	=	0.37	Significant			
1											
1		Risk Rating	Risk Level	Action Required							
1		0.0 - 0.18	Insignificant	Normal SI			there are a fille of				
1		0.19 - 0.42	Significant Substantial	Avoid construction	n of specific mitigati in the area if possib	on measures. Part ble. If unavoidable, o	urne supervision du detailed SI and desi	iring construction. ign of specific mitiga	tion measures. Full		
		0.67 - 1.0	Serious	Avoid construction	in this area.						

Peat Stability Risk Assessment											
	<b>Internat</b>	Grousem	wet Wind	Form		Inspected on:	2015 ECPI/PLP				
				Grousenn		Failli		Completed by:	SS		
						August 2015					
			1			T22 Tu	rbine & Hard	standing			
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment		
					LIKELIH	OOD		T			
1.0	Ground Conditions										
1.1	Peat Depth	2.2m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.		
	Subsoil Characteristics	Soft eapdy	Gravel/ Eirm		Coft Consilivo						
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried out by IGSL in 2015.		
2.0	Topography	T di daily	100	i unuary	140	-	•	-			
	Situation										
2.1	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Angle	NW	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar		
2.3	Slope Angle - Ground Surface	0° - 7°	<3°	>7°	3° - 7°	3	2	6	From LiDar. Worst case assumed.		
	Geomorphology										
2.4	General slope characteristics downslope	Convex	Concave	Planar	Convex	3	1	3	From LiDar		
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
0.0	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar		
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1	From site wells		
3.4	Evidence of piping Evidence drainage ditches	No	No Down clopo	- Variad / Oblique	Yes Across clopp	1	1	1	From site walk		
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.		
4.0	Other Factors										
	Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
4.2	Slide History	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aeriai photography and site waik		
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
	Land Use										
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
4.6	Existing roads in place	Solid Road	No	Farm out-houses	Dwelling	1	1	1	No existing road. Value assumed.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.		
	Likelihood Rating										
							Total	51	Likelihood Score Scale		
							Max Possible	12	0.3-0.5 Low 2		
-							Likelihood	0.71	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
					IMPA	ст					
5.0	Impact Factors										
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1,000 -	Potential for Bog burst	2	3	6			
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar		
5.3	Proximity to defined valley Valley profile	<200m Steen	>500m Flat	200-500m	<200m Steen	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water	2	1	2			
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk		
5.8	Buildings in potential peat flow path	No	Farm out-houses	- -	Dwelling	1	1	1	From aerial photography and site walk		
5.9	Impact Rating	Good	Good	Fair	Poor	1	1	1	Daseu un contractor facilities on site during construction.		
							Total	21	Impact Score Scale		
							Max Possible	33	0.0-0.3 Negligible 1		
									0.3-0.5 Low 2		
							Impact	0.64	0.5-0.7 Medium 3		
$\vdash$									corrist right 4		
	ı	ı	·	·	ı	·		ı	•		
					RISK RA	TING					
			Diele Detie e	1.11-111							
Risk Rating = Likelihood * Impact											
Risk Rating = 0.64 = 0.45 Substantial											
1											
1		Risk Rating	Risk Level	Action Required							
1		0.19-0.42	Insignificant	Targeted SJ decim	n of specific mitianti	on measures Parts	lime supervision du	ring construction			
		0.43 - 0.66	Substantial	Avoid construction	in the area if possib	le. If unavoidable, o	detailed SI and desi	gn of specific mitiga	tion measures. Full		
1		0.67 - 1.0	Serious	Avoid construction	in this area.						

Peat Stability Risk Assessment											
	<b>SE</b> Internat	Grousom	ount Wind	Form		Inspected on:	2015 ESRI / RI R				
		•	Grousenn		rann		Completed by:	SS			
							August 2015				
			r			T23 Tu	rbine & Hard	standing	1		
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment		
				1	LIKELIH	OOD			1		
1.0	Ground Conditions										
1.1	Peat Depth	1.3m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried out by IGSL in 2015.		
	Subsoil Characteristics				Unulgable						
1.3	Subsoil Type	Soft sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried out by IGSL in 2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried out by IGSL in 2015.		
2.0	Situation										
2.1	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Aspect	NE	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar		
	Slope Angle	-1	=0		-0 =0	0	2		From LiDer		
2.3	Geomorpholoav	>/"	<3"	>/*	3" - 7"	2	2	4	From Libar		
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar		
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
3.0	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar		
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1			
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	From Met Éireann, Based on average rainfall from 1985 - 2014		
4.0	Other Factors	21400 milityi	croot mitty	Tobo Trico mini ji	21400 millight	0		0			
	Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk		
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk		
	Land Use										
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.		
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.		
	Likelihood Rating										
-							Total Max Possible	48	Likelihood Score Scale		
							Max Possible	12	0.3-0.5 Low 2		
							Likelihood	0.67	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
					IMPA	СТ					
5.0	Impact Factors										
5.1	Volume of peat in potential peat flow	Medium	<pre>(&lt;1.000m<sup>3</sup>)</pre>	Medium (1,000 - Minor undefined	Potential for Bog burst	2	3	6			
5.2	Downslope features Provimity to defined valley	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar From LiDar		
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.7	Overnead lines in potential peat flow path Buildings in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.		
	Impact Rating										
-							Total	21	Impact Score Scale		
							Max Possible	33	0.0-0.3 Negligible 1		
							Impact	0.64	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
$\vdash$											
					BISK BA	TING					
					HIGITIA						
			Risk Rating =	Likelihood *	Impact						
Risk Rating = 0.67 0.64 = 0.42 Significant											
1		Risk Rating	Risk Level	Action Required							
1		0.0 - 0.18	Insignificant	Normal SI	n of specific mitia -*	on measures . Det	time supervision d	ring construction			
1		0.19 - 0.42	Substantial	Avoid construction	in the area if possib	ble. If unavoidable, o	detailed SI and desi	ign of specific mitiga	tion measures. Full		
1		0.67 - 1.0	Serious	Avoid construction	in this area.						

	T24 Turbine & Hardstanding										
	<b>Internat</b>	Grousem	ount Wind	Farm		Inspected on:	2015 ESDI/DI D				
				Grousenn		rann		Completed by:	SS		
								Date:	August 2015		
			1			T24 Tu	rbine & Hard	standing			
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment		
			1		LIKELIH	OOD	1	1			
1.0	Ground Conditions Peat										
1.1	Peat Depth	1.7m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Slowly squeezing	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	2	1	2	Trial pits carried out by IGSL in 2015.		
	Subsoil Characteristics		Gravel/ Firm		Soft Sensitive						
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	Gravel	Glacial Till Yes	Smooth Rock Partially	Clay	1	1	1	Trial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.		
2.0	Topography										
	Situation										
2.1	Elevation OD [m]	400m	<200m	WE	>200m	3	1	3	From LiDar		
2.2	Slope Angle	1444	3W, 3, 3E	vv, E	NWW, IN, INE	3		3	From Libar		
2.3	Slope Angle - Ground Surface	3° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar. Worst case assumed.		
	Geomorphology										
2.4	General slope characteristics downslope	Planar	Concave	Planar 50-100m	Convex	2	1	2	From LiDar From LiDar		
3.0	Hydrology										
	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Surface water	< 200m Localised	> 300m Localised	200 - 300m Ponded in drains	< 200m Springs/	3	1	3			
3.4	Evidence of piping	No	No	-	Surface Water Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Across slope	Down slope	Varied / Oblique	Across slope	3	1	3			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.		
4.0	Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk		
4.2	Slide History	- Elem	. Elem	- Elves	On eite		2	2	From Coological Survey of Ireland		
4.3	Evidence of movement in peat (e.g. tension cracks, step	> 5km No	> 5km No	< 5Km -	Yes	1	2	1	From Geological Survey of Ireland		
	Land Use										
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
4.6	Other Factors	Solid Boad	Solid Boad		Eloating Boad	1	1	1	No existing road. Value assumed		
4.0	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assumed.		
	Likelihood Rating	7 totolini		Commer	7 dddinin						
-							Total	50	Likelihood Score Scale		
							Max Possible	72	0.0-0.3 Negligible 1 0.3-0.5 Low 2		
-							Likelihood	0.69	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
					IMPA	СТ					
5.0	Impact Factors		Charles I. and an a								
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	Medium (1,000 - Minor undefined	Potential for Bog burst	2	3	6			
5.2	Proximity to defined valley	<200m	>500m	watercourse 200-500m	<200m	3	1	3	From LiDar From LiDar		
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
5.6	Public roads in potential peat flow path	No	No Phone L'	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.8	Buildings in potential peat flow path	No	No No	Farm out-houses	Dwelling	1	1	1	From service urawings and site walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.		
	Impact Rating										
┣—							Total	21	Impact Score Scale		
-									0.3-0.5 Low 2		
							Impact	0.64	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
┣—	<u> </u>										
					RISK RA	TING					
Risk Rating = Likelihood * Impact											
nisk naturg = U.09 U.04 = U.44 Substantial											
1		Risk Rating	Risk Level	Action Required							
1		0.19 - 0.42	Significant	Targeted SI, desig	n of specific mitigati	on measures. Part	time supervision du	ring construction.			
		0.43 - 0.66	Substantial	Avoid construction time supervision du	in the area if possib uring construction.	ble. If unavoidable, o	detailed SI and desi	gn of specific mitiga	tion measures. Full		
1		0.67 - 1.0	Serious	Avoid construction	in this area.						

		T25 Turbine & Hardstanding									
	<b>Internat</b>	Grousem	wet Wind	Form		Inspected on:	2015 ECRI/RI R				
			Grousenn		rann		Completed by:	SS			
								Date:	August 2015		
			1			T25 Tu	rbine & Hard	standing			
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment		
		1			LIKELIH	OOD	1				
1.0	Ground Conditions Peat										
1.1	Peat Depth	0.5m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.		
	Subsoil Characteristics	Soft sandy	Gravel/ Firm		Soft Sensitive						
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	gravelly silt Partially	Glacial Till Yes	Smooth Rock Partially	Clay	3	1	3	Trial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.		
2.0	Topography	,									
	Situation										
2.1	Elevation OD [m]	335m	<200m	WE	>200m	3	1	3	From LiDar		
2.2	Slope Angle	-	3W, 3, 3E	vv, E	NW, N, NE	2	1	2	From Libar		
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar		
	Geomorphology										
2.4	General slope characteristics downslope Distance from break in slope	Planar >100m	Concave	Planar 50-100m	< 50m	2	1	2	From LiDar From LiDar		
3.0	Hydrology										
	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Surface water	< 200m Localised	> 300m Localised	200 - 300m Ponded in drains	< 200m Springs/	3	1	3			
3.4	Evidence of piping	No	No	-	Surface Water Yes	1	1	1	From site walk		
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.		
4.0	Vegetation										
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk		
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk		
4.2	Slide History	- Elem	. Elem	- Elves	On eite		2	2	From Coological Surviv of Iroland		
4.3	Evidence of movement in peat (e.g. tension cracks, step	> 5km No	> 5km No	< 5Km -	Yes	1	2	2	From Geological Survey of Ireland		
	Land Use										
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
4.6	Other Factors	Solid Boad	Solid Boad		Eloating Boad	1	1	1	No existing road. Value assumed		
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assumed.		
	Likelihood Rating	7 dddinin		Commer	7 dddinin						
-							Total	43	Likelihood Score Scale		
							Max Possible	72	0.0-0.3 Negligible 1 0.3-0.5 Low 2		
-							Likelihood	0.60	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
					IMPA	СТ					
5.0	Impact Factors		Prese la contrare e								
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	Medium (1,000 - Minor undefined	Potential for Bog burst	2	3	6			
5.2	Proximity to defined valley	<200m	sowi/ contained	200-500m	<200m	3	1	3	From LiDar		
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
5.6	Public roads in potential peat flow path	No Electricity 11/	No Phone Lines	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.7	Buildings in potential peat flow path	Electricity, LV	Prione Lines	Electricity, LV	Dwelling	2	1	2	From service drawings and site walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.		
	Impact Rating										
<u> </u>							Total	24	Impact Score Scale		
⊢							max r'ossible	33	0.0-0.0 INEURIUM I 0.3-0.5 Low 2		
							Impact	0.73	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
⊢			1					1			
					RISK RA	TING					
Risk Rating = Likelihood * Impact											
Hisk Hating = 0.60 = 0.73 = 0.43 Substantial											
1											
		Risk Rating	Risk Level	Action Required							
1		0.0 - 0.18	Insignificant	Targeted SL design	n of specific mitigati	on measures Part	time supervision du	ring construction			
1		0.43 - 0.66	Substantial	Avoid construction time supervision de	in the area if possib	ble. If unavoidable,	detailed SI and desi	ign of specific mitiga	tion measures. Full		
1		0.67 - 1.0	Serious	Avoid construction	in this area.						

Peat Stability Risk Assessment Location: T26 Turbine & Hardstanding											
	Es Internat	Grousom	ount Wind	Form		Inspected on:	2015 ESRI / RI R				
			Grousenn		rann		Completed by:	SS			
								Date:	August 2015		
			r			T26 Tu	rbine & Hard	standing	1		
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment		
				1	LIKELIH	OOD			1		
1.0	Ground Conditions										
1.1	Peat Peat Depth	0.5m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	- 1	Trial pits carried out by IGSL in 2015.		
	Subsoil Characteristics				Unulgable						
1.3	Subsoil Type	Soft sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried out by IGSL in 2015.		
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried out by IGSL in 2015.		
2.0	Situation										
2.1	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar		
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar		
2.3	Slope Angle Slope Angle - Ground Surface	0° - > 10°	-0°	×7°	2° . 7°	3	2	6	From LiDar. Worst case assumed		
	Geomorphology	0 - 210	3	7	5-1	-		-			
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar		
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar		
3.0	Hydrology										
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar		
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar		
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1			
3.4	Evidence of piping	No	No Down clopo	- Variad / Oblique	Yes Across clopp	1	1	1	From site walk		
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.		
4.0	Other Factors										
	Vegetation										
4.1	Vegetation Forestry (if applicable)	Grasslands	Dry Heather	Grasslands	Wetlands Stunted Growth	2	1	2	From aerial photography and site walk From aerial photography and site walk		
4.2	Slide History	NPA .	Cloud Crowin	i di	Stanted Crowth	0	1.5	0			
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland		
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No		Yes	1	1	1	From site walk		
4.5	Land Use Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk		
	Other Factors										
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Farly	Floating Road	1	1	1	No existing road. Value assumed.		
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assumed.		
							Total	44	Likelihood Score Scale		
							Max Possible	72	0.0-0.3 Negligible 1		
							Likelihood	0.61	0.3-0.5 Low 2		
							Linciniood	0.01	0.7-1.0 High 4		
					IMPA	ст					
5.0	Impact Factors										
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1,000 -	Potential for Bog burst	2	3	6			
5.2	Downslope features	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar		
5.4	Valley profile	Steep	Flat	200-500m	<200m Steep	3	1	3	From LiDar		
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2			
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk		
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk		
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.		
	Impact Rating										
							Total	21	Impact Score Scale		
┣─							Max Possible	33	0.0-0.3 Negligible 1		
-							Impact	0.64	0.5-0.7 Medium 3		
									0.7-1.0 High 4		
									l		
					RISK BA	TING					
Risk Rating = Likelihood * Impact											
Risk Rating = 0.61 0.64 = 0.39 Significant											
1		Risk Rating	Risk Level	Action Required							
		0.19 - 0.42	Significant	Targeted SI, desig	n of specific mitigati	on measures. Part	time supervision du	ring construction.			
1		0.43 - 0.66	Substantial	Avoid construction time supervision du	in the area if possib uring construction.	ble. If unavoidable, o	detailed SI and desi	ign of specific mitiga	tion measures. Full		
		0.67 - 1.0	Serious	Avoid construction	in this area.						
1											
<b>ESB</b> International	Peat Stability Risk Assessment Grousemount Wind Farm	Location:       T         Inspected on:       2         Inspected by:       E         Completed by:       S         Date:       A	127 Turbine & Hardstanding 2015 ESBI / BLP SS SS Jugust 2015								
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	T27 Turbine &	Hardstanding									
Peat depth: < 0.5m => No further assessment required based on this depth of peat.											

	Peat Stability Risk Assessment Location: T28 Turbine & Hardstanding											
	Es Internat	ional		Groucom	ount Wind	Form		Inspected on:	2015 ESRI / RI R			
				Grousenn		rann		Completed by:	SS			
								Date:	August 2015			
			r			T28 Tu	rbine & Hard	standing	1			
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment			
					LIKELIH	OOD			1			
1.0	Ground Conditions											
1.1	Peat Peat Depth	0.5m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.			
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	- 1	Trial pits carried out by IGSL in 2015.			
	Subsoil Characteristics				Unulgable							
1.3	Subsoil Type	Soft sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried out by IGSL in 2015.			
1.4	Peat fibres continuous across transition to subsoil	Partially	Yes	Partially	No	2	1	2	Trial pits carried out by IGSL in 2015.			
2.0	Situation											
2.1	Elevation OD [m]	350m	<200m		>200m	3	1	3	From LiDar			
2.2	Slope Aspect	E	SW, S, SE	W, E	NW, N, NE	2	1	2	From LiDar			
2.3	Slope Angle Slope Angle - Ground Surface	0° - > 10°	-0°	×7°	2° . 7°	3	2	6	From LiDar. Worst case scenario assumed			
2.0	Geomorphology	0 - >10	<3	>/	3 - 7		-	0				
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar			
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar			
3.0	Hydrology											
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar			
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar			
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1				
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk			
3.5	Existing drainage ditches Annual Bainfall	>1400 mm/vr	<1000 mm/vr	Varied / Oblique	>1400 mm/vr	2	1	2	From Met Éireann, Based on average rainfall from 1985 - 2014.			
4.0	Other Factors											
	Vegetation											
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk			
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk			
	Land Use											
4.5	Peat Workings Other Factors	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk			
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.			
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.			
	Likelihood Rating						Tetel	45	Likelikeed Seere Seele			
	·						Max Possible	72	0.0-0.3 Negligible 1			
									0.3-0.5 Low 2			
-							Likelihood	0.63	0.5-0.7 Medium 3			
									0.7-1.0 High 4			
					IMPAG	СТ						
5.0	Impact Factors	Madium	Small volume	Medium	Potential for Bog	2	2	6				
5.1	Downslope features	Valley	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	burst Valley	3	1	3	From LiDar			
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar			
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar			
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply Regional Desci	2	1	2	From serial photography and site walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk			
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk			
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.			
	Impact Rating						Total	01	Impact Score Socia			
$\vdash$							Max Possible	33	0.0-0.3 Negligible 1			
									0.3-0.5 Low 2			
							Impact	0.64	0.5-0.7 Medium 3			
┣─									0.7×1.0 High 4			
⊢	<u> </u>	1	1	I	1	1	L	1	1			
					RISK RA	TING						
			Bick Boting	Likeliheed *	Impost							
			nisk naulig =	Likelihood	Impact							
1			Risk Rating =	0.63	0.64	=	0.40	Significant				
1		Rick Dating	Rick Louis	Action Required								
1		0.0 - 0.18	Insignificant	Normal SI								
1		0.19 - 0.42	Significant	Targeted SI, design	n of specific mitigati	on measures. Part	time supervision du	iring construction.				
1		0.43 - 0.66	Substantial	Avoid construction time supervision du	in the area if possit uring construction.	pie. It unavoidable, o	petailed SI and des	ıgrı of specific mitiga	mon measurés. Full			
		0.67 - 1.0	Serious	Avoid construction	in this area.							
1												

	Peat Stability Risk Assessment Location: T29 Turbine & Hardstanding											
	E Internat	ional		Grousem	wet Wind	Form		Inspected on:	2015 ECPI/PLP			
				Grousenn		rann		Completed by:	SS			
								Date:	August 2015			
			1			T29 Tu	rbine & Hard	standing				
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment			
					LIKELIH	OOD						
1.0	Ground Conditions											
1.1	Peat Depth	0.8m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.			
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.			
	Subsoil Characteristics	Soft eapdy	Gravel/ Eirm		Soft Sonsitivo							
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.			
2.0	Topography	Parualiy	Tes	Fartially	NO	2	1	2				
	Situation											
2.1	Elevation OD [m]	355m	<200m		>200m	3	1	3	From LiDar			
2.2	Slope Aspect	S	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar			
2.3	Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar. Worst case scenario assumed.			
	Geomorphology											
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar			
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar			
3.0	Hydrology											
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes $\ge 3^{\circ}$	3	1	3	From LiDar			
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar			
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1				
3.4	Evidence of piping	No	No Down clopo	- Variad / Oblique	Yes Across clopp	1	1	1	From site walk			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.			
4.0	Other Factors											
	Vegetation											
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk			
4.2	Slide History	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aeriai photography and site waik			
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk			
	Land Use											
4.5	Peat Workings Other Factors	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk			
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.			
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.			
	Likelihood Rating											
-							l otal Max Possible	44	Likelihood Score Scale			
							max r obbibie	12	0.3-0.5 Low 2			
							Likelihood	0.61	0.5-0.7 Medium 3			
-									0.7-1.0 High 4			
	<u> </u>											
					IMPA	СТ						
5.0	Impact Factors		Small volume	Mada	Datastist (s. Das							
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	(1,000 - Minor undefined	burst	2	3	6				
5.2	Proximity to defined vallev	<200m	Sowi/ contained	watercourse 200-500m	<200m	3	1	3	From LiDar			
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar			
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2				
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk			
5.7	Overhead lines in potential peat flow path Buildings in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk			
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.			
	Impact Rating											
							Total	21	Impact Score Scale			
┣—							Max Possible	33	0.0-0.3 Negligible 1			
<u> </u>	<u> </u>						Impact	0.64	0.5-0.7 Medium 3			
F							1		0.7-1.0 High 4			
					DICK DA	TING						
					RISK RA	IING						
			Risk Rating =	Likelihood *	Impact							
						т		-				
1			Risk Rating =	0.61	0.64	=	0.39	Significant				
1												
1	l l	Risk Rating	Risk Level	Action Required								
1		0.0 - 0.18	Insignificant	Normal SI								
U.19 - U.42 Significant largeted St, design of specific mitigation measures. Part time supervision during construction.												
1		0.67 - 1.0	Serious	time supervision du Avoid construction	in this area.							
		L										
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	Peat Stability Risk Assessment Location: T30 Turbine & Hardstanding												
	<b>Internat</b>	iona		Grousemo	ount Wind	Farm		Inspected on: Inspected by:	2015 ESBI / BLP				
								Completed by:	SS August 2015				
						August 2010		<u> </u>					
				Bating		T30 Tu	rbine & Hard	standing	1				
No.	Likelihood/ Impact Factors	Value	1	2	3	Rating Value	Weighting	Score	Comment				
10	Occurred Occurrent Manage				LIKELIH	OOD	1		1				
1.0	Peat												
1.1	Peat Depth	<1m	<1m	>3m	1-3m	1	2	2	Based on peat prot	es and site investigation carried o	ut by IGSL in 2015.		
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried ou	t by IGSL in 2015.			
10	Subsoil Characteristics	Boulders /	Gravel/ Firm	Ore with David	Soft Sensitive	15		4.5	Wate Latin an actual as	No. 1001 - 2015			
1.3	Peat fibres continuous across transition to subsoil	bedrock No	Glacial Till Yes	Partially	Clay No	3	1	3	Trial pits carried ou Trial pits carried ou	t by IGSL in 2015.			
2.0	Topography												
	Situation												
2.1	Elevation OD [m]	350m	<200m	W E	>200m	3	1	3	From LiDar				
2.2	Slope Angle	3E	3W, 3, 3E	W, E	INW, IN, INE			1	FIOIII LIDai				
2.3	Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar. Worst	case assumed.			
	Geomorphology												
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar				
2.5 3.0	Hydrology	> i dum	> 100m	50-100m	< JUII			-	n om Libar				
	Hydrology												
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar				
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m Springs/	3	1	3	From LiDar				
3.3	Surrace water Evidence of piping	Localised	Localised	Ponded in drains	Surface Water Yes	1	1	1	From site walk				
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2					
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann.	Based on average rainfall from 19	85 - 2014.		
4.0	Other Factors												
4.1	Vegetation	Gracelande	Dry Heather	Gracelande	Watlands	2	1	2	From parial photog	raphy and eito walk			
4.1	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photog	raphy and site walk			
	Slide History												
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Si	urvey of Ireland			
4.4	features, compression features)	No	No	-	Yes	1	1	1	From site walk				
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photog	raphy and site walk			
	Other Factors												
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Forky	Floating Road	1	1	1	No existing road. V	alue assumed.			
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assume	ed.			
							Total	43.5		Likelihood Score Sca	ale		
							Max Possible	72		0.0-0.3 Negligible 1			
										0.3-0.5 Low 2			
							Likelihood	0.60		0.5-0.7 Medium 3			
										Child High			
5.0	kannan Fastan				IMPAG	СТ	1		1				
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6					
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar				
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar				
5.4	Valley profile	Steep	Flat	Intermediate	Steep Drinking water	3	1	3	From LiDar				
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	1	1	1	From aerial photog	raphy and site walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawi	ngs and site walk			
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photog	raphy and site walk			
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contracto	r tacilities on site during construct	.on.		
							Total	21		Impact Score Sca	ale		
L							Max Possible	33		0.0-0.3 Negligible 1			
										0.3-0.5 Low 2			
<u> </u>							Impact	0.64		0.5-0.7 Medium 3			
<u> </u>						<u> </u>				- I ingh 4			
-					RISK RA	TING							
			Risk Rating =	Likelihood *	Impact								
			-										
			Risk Rating =	0.60	0.64	=	0.38	Significant					
		Risk Rating	Risk Level	Action Required						ſ			
		0.0 - 0.18	Insignificant	Normal SI									
0.19 - 0.42 Significant Targeted SI, design of specific mitigation measures. Part time supervision during construction.													
		0.43 - 0.66	Substantial	time supervision du	in this area								
		0.07 - 1.0	Gentuus							l			
1													

	Peat Stability Risk Assessment Location: T31 Turbine & Hardstanding											
	E Internat	ional		Grousem	wet Wind	Form		Inspected on:	2015 ECD1/DLD			
				Grousenn		rann		Completed by:	SS .			
								Date:	August 2015			
			1			T31 Tu	rbine & Hard	standing				
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment			
		1	1		LIKELIH	OOD	1		1			
1.0	Ground Conditions Peat											
1.1	Peat Depth	0.5m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.			
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.			
	Subsoil Characteristics	Soft sandy	Gravel/ Firm		Soft Sensitive	-						
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	gravelly clay Yes	Glacial Till Yes	Smooth Rock Partially	Clay	3	1	3	Trial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.			
2.0	Topography	100	100	i unuary	110							
	Situation											
2.1	Elevation OD [m]	350m	<200m		>200m	3	1	3	From LiDar			
2.2	Slope Aspect Slope Angle	SE	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar			
2.3	Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar. Worst case assumed.			
	Geomorphology											
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar			
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar			
0.0	Hydrology											
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar			
3.2	Distance from head of defined watercourse	200 - 300m	> 300m	200 - 300m	< 200m	1	1	1	From LiDar			
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1	From alto wolk			
3.4	Evidence of piping Evisting drainage ditches	No	No Down clopo	- Variad / Oblique	Yes Across clopp	1	1	1	From site walk			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.			
4.0	Other Factors											
	Vegetation											
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk			
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk			
	Land Use											
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk			
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.			
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early Summer	Late Summer/	3	1	3	Worst case assumed.			
	Likelihood Rating	7 dddinin		Commen	7 dddinin							
-							Total	43	Likelihood Score Scale			
							Max Possible	72	0.0-0.3 Negligible 1			
							Likelihood	0.60	0.5-0.7 Medium 3			
									0.7-1.0 High 4			
					IMDA	ст						
5.0	Impact Factors											
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1.000 -	Potential for Bog burst	2	3	6				
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar			
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar			
5.4	Valley profile Downstream aquatic environment	Steep	Hat Non-sensitive	Sensitive	Steep Drinking water	3	1	2				
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	1	1	1	From aerial photography and site walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk			
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk			
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.			
	impost fiating						Total	21	Impact Score Scale			
<u> </u>							Max Possible	33	0.0-0.3 Negligible 1			
									0.3-0.5 Low 2			
L							Impact	0.64	0.5-0.7 Medium 3			
<u> </u>									0.7-1.0 High 4			
⊢	<u> </u>	1	1	1	1	1	1	1	1			
					RISK RA	TING						
			Risk Rating =	Likelihood *	Impact							
			Bisk Bating =	0.60	0.64	=	0.38	Significant				
			mok nating =	0.00	0.04	1	0.00	olgrinount				
1		Risk Rating	Risk Level	Action Required								
1		0.0 - 0.18	Insignificant	Normal SI	n of one - Mr - 11		time out and the t	vian and the st				
1	tion measures. Full											
1		0.67 - 1.0	Serious	ume supervision du Avoid construction	uring construction. in this area.							



Grousemount Wind Farm

Location:	T32 Turbine & Hardstanding	
Inspected on:	2015	
Inspected by:	ESBI / BLP	
Completed by:	SS	
Date:	August 2015	

T32 Turbine & Hardstanding

Peat depth: < 0.5m => No further assessment required based on this depth of peat.

	Peat Stability Risk Assessment Location: T33 Turbine & Hardstanding											
	E Internat	ional		Grousem	wet Wind	Form		Inspected on:	2015 ECD1/DLD			
				Grousenn		rann		Completed by:	SS .			
								Date:	August 2015			
			1			T33 Tu	rbine & Hard	standing				
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment			
		1	1		LIKELIH	OOD	1		1			
1.0	Ground Conditions Peat											
1.1	Peat Depth	0.6m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.			
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.			
	Subsoil Characteristics	<b>a</b> 1	Gravel/ Firm		Soft Sensitive							
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	Gravel	Glacial Till Yes	Smooth Rock Partially	Clay	1	1	2	Trial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.			
2.0	Topography	T di daily	100	i unuary	110	-		-				
	Situation											
2.1	Elevation OD [m]	395m	<200m		>200m	3	1	3	From LiDar			
2.2	Slope Aspect Slope Angle	SE	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar			
2.3	Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar. Worst case assumed.			
	Geomorphology											
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar			
2.5	Distance from break in slope	50-100m	> 100m	50-100m	< 50m	2	1	2	From LiDar			
0.0	Hydrology											
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar			
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar			
3.3	Surface water	Localised	Localised	Ponded in drains	Surface Water	1	1	1	From alto walk			
3.4	Evidence of piping Evisting drainage ditches	No	No Down clopo	- Variad / Oblique	Yes Across clopp	1	1	1	From site walk			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.			
4.0	Other Factors											
	Vegetation											
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk			
4.2	Slide History	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aenai photography and site waik			
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk			
	Land Use											
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk			
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.			
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early Summer	Late Summer/	3	1	3	Worst case assumed.			
	Likelihood Rating	7 dddinin		Commen	7 dddinin							
-							Total	45	Likelihood Score Scale			
							Max Possible	72	0.0-0.3 Negligible 1			
							Likelihood	0.63	0.5-0.7 Medium 3			
									0.7-1.0 High 4			
					IMDA	ст						
5.0	Impact Factors											
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1.000 -	Potential for Bog burst	2	3	6				
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar			
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar			
5.4	valley profile	Sensitive	Flat Non-sensitive	Intermediate	Steep Drinking water	3	1	3	From LIDar			
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	1	1	1	From aerial photography and site walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk			
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk			
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.			
	Impost fidding						Total	21	Impact Score Scale			
							Max Possible	33	0.0-0.3 Negligible 1			
									0.3-0.5 Low 2			
							Impact	0.64	0.5-0.7 Medium 3			
									0.7-1.0 High 4			
$\vdash$	<u> </u>	1	1	1	1	1	1	1	1			
					RISK RA	TING						
			Risk Rating =	Likelihood *	Impact							
			Bisk Bating -	0.63	0.64	_	0.40	Significant				
			mok nating =	0.00	0.04	1	0.40	olgrinount				
		Risk Rating	Risk Level	Action Required								
1		0.0 - 0.18	Insignificant	Normal SI	n of one-We - 11		time out and the t	vian and the st				
1	tion measures. Full											
1		0.67 - 1.0	Serious	ume supervision du Avoid construction	uring construction. in this area.							
1												

	Peat Stability Risk Assessment Location: T34 Turbine & Hardstanding											
	E Internat	ional		Grousem	wet Wind	Form		Inspected on:	2015 ECRI/RI D			
				Grousenn		rann		Completed by:	SS			
								Date:	August 2015			
			1			T34 Tu	rbine & Hard	standing				
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment			
					LIKELIH	OOD						
1.0	Ground Conditions											
1.1	Peat Depth	0.6m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.			
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/ Undiggable	1	1	1	Trial pits carried out by IGSL in 2015.			
	Subsoil Characteristics		Gravel/ Eirm		Soft Sonsitivo							
1.3	Subsoil Type Peat fibres continuous across transition to subsoil	Sandy gravel	Glacial Till	Smooth Rock	Clay	1	1	1	Trial pits carried out by IGSL in 2015. Trial pits carried out by IGSL in 2015.			
2.0	Topography	Partialiy	Tes	Fartially	NO	2	1	2				
	Situation											
2.1	Elevation OD [m]	400m	<200m		>200m	3	1	3	From LiDar			
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar			
2.3	Slope Angle - Ground Surface	>7°	<3°	>7°	3° - 7°	2	2	4	From LiDar			
	Geomorphology											
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar			
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar			
3.0	Hydrology											
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes $\ge 3^{\circ}$	3	1	3	From LiDar			
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar			
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1				
3.4	Evidence of piping	No	No Down clopo	- Variad / Oblique	Yes Across clopp	1	1	1	From site walk			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.			
4.0	Other Factors											
	Vegetation											
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk			
4.2	Slide History	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aeriai photography and site waik			
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk			
	Land Use											
4.5	Peat Workings Other Factors		None	Cutaway/Turbary	Machine Cut	0	1	0	From aerial photography and site walk			
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.			
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.			
	Likelihood Rating											
-							I otal Max Possible	43 69	Likelihood Score Scale			
							max r obbibic	00	0.3-0.5 Low 2			
							Likelihood	0.62	0.5-0.7 Medium 3			
-									0.7-1.0 High 4			
	<u> </u>											
					IMPA	СТ						
5.0	Impact Factors											
5.1	Volume of peat in potential peat flow	Medium	(<1.000m <sup>3</sup> )	Medium (1,000 - Minor undefined	Potential for Bog burst	2	3	6				
5.2	Downslope features Provimity to defined valley	Valley	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar From LiDar			
5.4	Valley profile	Steep	Flat	Intermediate	Steep	3	1	3	From LiDar			
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2				
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk			
5.8 5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.			
	Impact Rating											
							Total	19	Impact Score Scale			
							Max Possible	33	0.0-0.3 Negligible 1			
<u> </u>							Impact	0.58	0.5-0.7 Medium 3			
⊢								0.05	0.7-1.0 High 4			
					DI0:1	TING						
					RISK RA	TING						
			Risk Rating =	Likelihood *	Impact							
						_		_				
			Risk Rating =	0.62	0.58	=	0.36	Significant				
1												
1		Risk Rating	Risk Level	Action Required								
1		0.0 - 0.18	Insignificant	Normal SI								
1		0.19 - 0.42	Significant	Targeted SI, design	n of specific mitigati	on measures. Part	time supervision du	ring construction.				
		0.43 - 0.66	Substantial	Avoid construction time supervision du	in the area if possib uring construction.	pie. Il unavoidable, o	detailed SI and desi	ign of specific mitiga	neasures. Full			
1		0.67 - 1.0	Serious	Avoid construction	in this area.							

	Peat Stability Risk Assessment Location: T35 Turbine & Hardstanding											
	Es Internat	ional		Groucom	ount Wind	Form		Inspected on:	2015 ESBI / BLR			
			•	Grousenn		rann		Completed by:	SS			
								Date:	August 2015			
			r			T35 Tu	rbine & Hard	standing	1			
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment			
					LIKELIH	OOD			1			
1.0	Ground Conditions											
1.1	Peat Peat Depth	<1m	<1m	>3m	1-3m	1	2	2	Based on peat probes and site investigation carried out by IGSL in 2015.			
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried out by IGSL in 2015.			
	Subsoil Characteristics	<u> </u>			0. (. 0							
1.3	Subsoil Type	gravelly silt	Glacial Till	Smooth Rock	Clay	3	1	3	Trial pits carried out by IGSL in 2015.			
1.4 2.0	Pear hores continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	That pits carried out by IGSE in 2015.			
	Situation											
2.1	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar			
2.2	Slope Aspect	SE	SW, S, SE	W, E	NW, N, NE	1	1	1	From LiDar			
2.3	Slope Angle - Slope Angle - Ground Surface	0° - >10°	<3°	>7°	3° - 7°	3	2	6	From LiDar. Worst case assumed.			
	Geomorphology											
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar			
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar			
3.0	Hydrology											
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar			
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar			
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1	France allo constitu			
3.4	Evidence of piping Existing drainage ditches	No	No Down slone	- Varied / Oblique	Yes Across slope	1	1	2	From site walk			
3.6	Annual Rainfall	>1400 mm/yr	<1000 mm/yr	1000-1400 mm/yr	>1400 mm/yr	3	1	3	From Met Éireann. Based on average rainfall from 1985 - 2014.			
4.0	Other Factors											
	Vegetation											
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands Stunted Growth	2	1	2	From aerial photography and site walk			
4.2	Slide History	INA	Good Growin	raii	Stunted Growth	0	1.5	0				
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk			
4.5	Land Use		None	Cuteway/Turkeey	Machina Cut			0	From parial photography and site walk			
4.5	Other Factors		None	Gulaway/Turbary	Machine Gut	0	1	0				
4.6	Existing roads in place	Solid Road	Solid Road	Winter / Forky	Floating Road	1	1	1	No existing road. Value assumed.			
4.7	Time of year for construction	Autumn	Spring	Summer	Autumn	3	1	3	Worst case assumed.			
							Total	42	Likelihood Score Scale			
							Max Possible	60	0.0-0.3 Negligible 1			
							1.11-11	0.70	0.3-0.5 Low 2			
							Likelinood	0.70	0.7-1.0 High 4			
5.0	Impact Factors				IMPA	СТ						
5.1	Volume of peat in potential peat flow	Medium	Small volume	Medium	Potential for Bog	2	3	6				
5.2	Downslope features	Valley	Bowl/ contained	Minor undefined watercourse	Valley	3	1	3	From LiDar			
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar			
5.4	Valley profile Downstream aquatic environment	Steep	Hat Non-sensitive	Sensitive	Steep Drinking water	3	1	2				
5.6	Public roads in potential peat flow path	No	No	Local Road	supply Regional Road	1	1	1	From aerial photography and site walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk			
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk			
5.9	Impact Rating	Good	Good	rair	Poor	1		1	Cases on contractor racinities on site during construction.			
							Total	21	Impact Score Scale			
							Max Possible	33	0.0-0.3 Negligible 1			
<u> </u>							Impact	0.64	0.3-0.5 Low 2			
F-	<u> </u>						mpact	0.64	0.5-0.7 Medium 3			
						7010						
_					RISK RA	IING						
			Risk Rating =	Likelihood *	Impact							
						-		-				
			Risk Rating =	0.70	0.64	=	0.45	Substantial				
1	I	Risk Rating	Risk Level	Action Required								
1		0.0 - 0.18	Insignificant	Normal SI								
1		tion measures. Full										
1		0.67 - 1.0	Serious	ume supervision du Avoid construction	uring construction. in this area.							
L												



Grousemount Wind Farm

Location:	T36 Turbine & Hardstanding
Inspected on:	2015
Inspected by:	ESBI / BLP
Completed by:	SS
Date:	August 2015

T36 Turbine & Hardstanding

Peat depth: < 0.5m => No further assessment required based on this depth of peat.

	Peat Stability Risk Assessment Location: T37 Turbine & Hardstanding											
	Es Internat	ional		Groucom	ount Wind	Form		Inspected on:	2015 ESRI / RI R			
				Grousenn		rann		Completed by:	SS			
								Date:	August 2015			
			r			T37 Tu	rbine & Hard	standing	1			
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment			
					LIKELIH	OOD			1			
1.0	Ground Conditions											
1.1	Peat Peat Depth	1m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.			
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried out by IGSL in 2015.			
	Subsoil Characteristics				Unulgable							
1.3	Subsoil Type	Soft sandy gravelly silt	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	3	1	3	Trial pits carried out by IGSL in 2015.			
1.4	Peat fibres continuous across transition to subsoil	Yes	Yes	Partially	No	1	1	1	Trial pits carried out by IGSL in 2015.			
2.0	Situation											
2.1	Elevation OD [m]	400m	<200m		>200m	3	1	3	From LiDar			
2.2	Slope Aspect	NW	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar			
	Slope Angle	-0	=0	-0	-0 =0	0	2		From LiDer			
2.3	Geomorpholoav	>/*	<3"	>/*	3" - 7"	2	2	4	From Libar			
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar			
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar			
3.0	Hydrology											
3.1	In broad valley upslope from defined watercourse	Yes, slopes > 20	No	Yes, slones < 20	Yes, slones > 20	3	1	3	From LiDar			
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar			
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1				
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk			
3.5	Existing drainage ditches	Varied	Down slope	Varied / Oblique	Across slope	2	1	2	From Mat Éireann, Basad on average rainfall from 1995 - 2014			
4.0	Other Factors	>1400 min yr	Crooo mintyr	1000-1400 1111/91	>1400 mmbyr	5	-	5	i forr wei Eireann. based on average fainiai noin 1300 - 2014.			
	Vegetation											
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk			
4.2	Forestry (if applicable)	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aerial photography and site walk			
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland			
4.4	Evidence of movement in peat (e.g. tension cracks, step	No	No		Yes	1	1	1	From site walk			
	Land Use											
4.5	Peat Workings	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk			
4.6	Other Factors Existing roads in place	Solid Boad	Solid Boad		Eloating Boad	1	1	1	No existing road. Value assumed			
4.7	Time of year for construction	Late Summer/	Spring	Winter / Early	Late Summer/	3	1	3	Worst case assumed.			
	Likelihood Rating											
							Total	47	Likelihood Score Scale			
							Max Possible	12	0.3-0.5 Low 2			
							Likelihood	0.65	0.5-0.7 Medium 3			
									0.7-1.0 High 4			
					IMPA	СТ						
5.0	Impact Factors											
5.1	Volume of peat in potential peat flow	Medium	Small volume (<1.000m <sup>3</sup> )	Medium (1,000 -	Potential for Bog burst	2	3	6				
5.2	Downslope features	Contained	Bowl/ contained	watercourse	Valley	3	1	3	From LiDar			
5.4	Valley profile	Flat	Flat	Intermediate	Steep	3	1	3	From LiDar			
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	Drinking water supply	2	1	2				
5.6	Public roads in potential peat flow path	No	No	Local Road	Regional Road	1	1	1	From aerial photography and site walk			
5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk			
5.8 5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.			
	Impact Rating											
							Total	21	Impact Score Scale			
┣—							Max Possible	33	0.0-0.3 Negligible 1			
<u> </u>							Impact	0.64	0.5-0.7 Medium 3			
	<u> </u>								0.7-1.0 High 4			
					DICK DA	TING						
					HISK HA	anne						
			Risk Rating =	Likelihood *	Impact							
								-				
1			Risk Rating =	0.65	0.64	=	0.42	Significant				
1		Risk Rating	Risk Level	Action Required								
1		0.0 - 0.18	Insignificant	Normal SI								
		0.19 - 0.42	Significant	Targeted SI, design Avoid construction	n of specific mitigati	on measures. Part	time supervision du detailed SI and desi	iring construction.	tion measures. Full			
1		0.67 - 1.0	Substantial	time supervision du Avoid construction	uring construction. in this area.			. ,				
									I			

	Peat Stability Risk Assessment Location: T38 Turbine & Hardstanding											
	Es Internat	ional		Groucom	ount Wind	Form		Inspected on:	2015 ESRI / RI R			
			•	Grousenn		rann		Completed by:	SS			
								Date:	August 2015			
			r			T38 Tu	rbine & Hard	standing	1			
No.	Likelihood/ Impact Factors	Value	1	Rating 2	3	Rating Value	Weighting	Score	Comment			
					LIKELIH	OOD						
1.0	Ground Conditions											
1.1	Peat Peat Depth	0.6 - 2.4m	<1m	>3m	1-3m	3	2	6	Based on peat probes and site investigation carried out by IGSL in 2015.			
1.2	Peat Condition in Trial Pits	Stands Well	Dry/ Stands well	Slowly squeezing	Extremely Wet/	1	1	1	Trial pits carried out by IGSL in 2015.			
	Subsoil Characteristics				Unulgable							
1.3	Subsoil Type	Cobbles & boulders	Gravel/ Firm Glacial Till	Smooth Rock	Soft Sensitive Clay	1	1	1	Trial pits carried out by IGSL in 2015.			
1.4	Peat fibres continuous across transition to subsoil		Yes	Partially	No		1	0	Trial pits carried out by IGSL in 2015.			
2.0	Situation											
2.1	Elevation OD [m]	390m	<200m		>200m	3	1	3	From LiDar			
2.2	Slope Aspect	N	SW, S, SE	W, E	NW, N, NE	3	1	3	From LiDar			
2.3	Slope Angle Slope Angle - Ground Surface	×7º	-0°	×7°	2° . 7°	2	2	4	From LiDar			
	Geomorphology	21	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	21	5-1	_	-					
2.4	General slope characteristics downslope	Planar	Concave	Planar	Convex	2	1	2	From LiDar			
2.5	Distance from break in slope	>100m	> 100m	50-100m	< 50m	1	1	1	From LiDar			
3.0	Hydrology											
3.1	In broad valley upslope from defined watercourse	Yes, slopes ≥ 3°	No	Yes, slopes < 3°	Yes, slopes ≥ 3°	3	1	3	From LiDar			
3.2	Distance from head of defined watercourse	< 200m	> 300m	200 - 300m	< 200m	3	1	3	From LiDar			
3.3	Surface water	Localised	Localised	Ponded in drains	Springs/ Surface Water	1	1	1				
3.4	Evidence of piping	No	No	-	Yes	1	1	1	From site walk			
3.5	Existing drainage ditches Annual Bainfall	>1400 mm/vr	<1000 mm/vr	Varied / Oblique	>1400 mm/vr	2	1	2	From Met Éireann, Based on average rainfall from 1985 - 2014.			
4.0	Other Factors											
	Vegetation											
4.1	Vegetation	Grasslands	Dry Heather	Grasslands	Wetlands	2	1	2	From aerial photography and site walk			
4.2	Slide History	N/A	Good Growth	Fair	Stunted Growth	0	1.5	0	From aeriai photography and site waik			
4.3	Previous slides in locality	> 5km	> 5km	< 5km	On site	1	2	2	From Geological Survey of Ireland			
4.4	Evidence of movement in peat (e.g. tension cracks, step features, compression features)	No	No	-	Yes	1	1	1	From site walk			
	Land Use											
4.5	Peat Workings Other Factors	None	None	Cutaway/Turbary	Machine Cut	1	1	1	From aerial photography and site walk			
4.6	Existing roads in place	Solid Road	Solid Road		Floating Road	1	1	1	No existing road. Value assumed.			
4.7	Time of year for construction	Late Summer/ Autumn	Spring	Winter / Early Summer	Late Summer/ Autumn	3	1	3	Worst case assumed.			
	Likelihood Rating						Tatal	44	Likelikeed Seere Seele			
	·						Max Possible	69	0.0-0.3 Negligible 1			
									0.3-0.5 Low 2			
-							Likelihood	0.64	0.5-0.7 Medium 3			
									0.7-1.0 High 4			
		•			IMPAG	СТ	•					
5.0	Impact Factors	Madium	Small volume	Medium	Potential for Bog	2	2	6				
5.2	Downslope features	Contained	(<1.000m <sup>3</sup> ) Bowl/ contained	(1,000 - Minor undefined	burst Valley	3	1	3	From LiDar			
5.3	Proximity to defined valley	<200m	>500m	200-500m	<200m	3	1	3	From LiDar			
5.4	Valley profile	Flat	Flat	Intermediate	Steep	3	1	3	From LiDar			
5.5	Downstream aquatic environment	Sensitive	Non-sensitive	Sensitive	supply Regional Desci	2	1	2	From serial photography and elic walk			
5.6 5.7	Overhead lines in potential peat flow path	No	Phone Lines	Electricity, LV	Electricity MV, HV	1	1	1	From service drawings and site walk			
5.8	Buildings in potential peat flow path	No	No	Farm out-houses	Dwelling	1	1	1	From aerial photography and site walk			
5.9	Capability to respond (access and resources)	Good	Good	Fair	Poor	1	1	1	Based on contractor facilities on site during construction.			
	Impact Rating						Total	01	Impact Score Socia			
$\vdash$							Max Possible	33	0.0-0.3 Negligible 1			
									0.3-0.5 Low 2			
							Impact	0.64	0.5-0.7 Medium 3			
┣─									0.7×1.0 High 4			
⊢	<u> </u>	1	1	I	1	1	1	1	1			
					RISK RA	TING						
			Bick Boting	Likeliheed *	Impost							
			nisk naulig =	Likelihood	Impact							
			Risk Rating =	0.64	0.64	=	0.41	Significant				
1		Rick Dating	Rick Louis	Action Required								
1		0.0 - 0.18	Insignificant	Normal SI								
1		0.19 - 0.42	Significant	Targeted SI, design	n of specific mitigati	on measures. Part	time supervision du	ring construction.				
1		0.43 - 0.66	Substantial	Avoid construction time supervision du	in the area if possit uring construction.	pie. It unavoidable, o	petailed SI and des	gn of specific mitiga	mon measurés. Full			
		0.67 - 1.0	Serious	Avoid construction	in this area.							
1												



Grousemount Wind Farm

 Location:
 Substation

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

Substation Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth Based on peat probes and site investigation carried out by IGSL in 2015. 1-3m <1m 2 6 >3m 1-3m 3 Extremely Wet 1.2 Peat Condition in Trial Pits Dry/ Stands well 2 1 2 Trial pits carried out by IGSL in 2015. Slowly squeezing Slowly squeezing Undiggable Subsoil Characteristics Soft sandy Gravel/ Firm Soft Sensitive 1.3 Subsoil Type Smooth Rock 3 3 Trial pits carried out by IGSL in 2015. 1 avelly silt / cla Glacial Till Clay 1.4 Peat fibres continuous across transition to subsoil Trial pits carried out by IGSL in 2015. Partially 2 1 2 Partially Yes No 2.0 Topography Situation 2.1 Elevation OD [m] 350m <200m >200m 3 3 From LiDar 1 2.2 Slope Aspect Ν SW, S, SE W, E NW, N, NE 3 1 3 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 3 2 6 From LiDar. Worst case assumed. >7° 3° - 7° 0° - >10° <3° Geomorphology 2.4 General slope characteristics downslope Planar Concave Planar Convex 2 1 2 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 3 1 3 From LiDar < 200m < 200m 3.3 Surface water Springs/ 1 1 Localised Localised Ponded in drains 1 Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope Across slope 2 1 2 Varied Varied / Oblique From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 4.2 Forestry (if applicable) From aerial photography and site walk N/A 0 1.5 0 Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality < 5km > 5km < 5km On site 2 2 4 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use 4.5 Peat Workings None Cutaway/Turbary Machine Cut 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 53 Total Likelihood Score Scale Max Possible 72 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.5-0.7 Medium 3 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar Valley 3 1 3 Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 3 1 3 From LiDar <200m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No 5.8 Buildings in potential peat flow path 1 1 1 No No Farm out-houses Dwelling From aerial photography and site walk 5.9 Capability to respond (access and resources) Good Good Fair Poor 1 1 1 Based on contractor facilities on site during construction. Impact Rating 21 Total Impact Score Scale Max Possible 33 0.0-0.3 Negligible 1 Low 0.3-0.5





Grousemount Wind Farm

 Location:
 Borrow Pit A

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

August 2015 Date: **Borrow Pit A** Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth 0.4 - 1.4m Based on peat probes and site investigation carried out by IGSL in 2015. <1m 2 6 >3m 1-3m 3 Extremely Wet Trial pits carried out by IGSL in 2015. 1.2 Peat Condition in Trial Pits Stands Well Dry/ Stands well Slowly squeezing 1 1 1 Undiggable Subsoil Characteristics Sandy gravelly si Gravel/ Firm 1.3 Subsoil Type Smooth Rock Soft Sensitive 3 3 Trial pits carried out by IGSL in 2015. 1 / clay Glacial Till Clay Trial pits carried out by IGSL in 2015. 1.4 Peat fibres continuous across transition to subsoil Partially 1 1 1 Yes Yes No 2.0 Topography Situation 2.1 Elevation OD [m] 390m <200m >200m 3 3 From LiDar 1 2.2 Slope Aspect SE SW, S, SE W, E NW, N, NE 1 1 1 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 3 2 6 From LiDar. Worst case assumed. >7° 3° - 7° 0° - >10° <3° Geomorphology 2.4 General slope characteristics downslope Planar Concave Planar Convex 2 1 2 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 3 1 3 From LiDar < 200m < 200m 3.3 Surface water Springs/ 1 1 1 Localised Localised Ponded in drains Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope 2 1 2 Varied Varied / Oblique Across slope From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 4.2 Forestry (if applicable) N/A 0 1.5 0 From aerial photography and site walk Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality > 5km > 5km < 5km On site 1 2 2 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use 4.5 Peat Workings None Cutaway/Turbary Machine Cut 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 47 Total Likelihood Score Scale 72 Max Possible 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.65 0.5-0.7 Medium 3 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar Valley 3 1 3 Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 3 1 3 From LiDar <200m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 1 1 1 From aerial photography and site walk No Local Road No Regional Road

5.6 Public roads in potential peat flow path Electricity MV, HV 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV No 5.8 Buildings in potential peat flow path 1 1 No No Farm out-houses Dwelling 1 From aerial photography and site walk 5.9 Capability to respond (access and resources) Good Good Fair Poor 1 1 1 Based on contractor facilities on site during construction. Impact Rating 21 Total Impact Score Scale Max Possible 33 0.0-0.3 Negligible 1 Low 0.3-0.5 0.5-0.7 Medium 3 0.64 Impact





Grousemount Wind Farm

 Location:
 Borrow Pit B

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

Low

0.3-0.5

Borrow Pit B Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth 2 Based on peat probes and site investigation carried out by IGSL in 2015. <1m <1m 2 >3m 1-3m 1 Extremely Wet Trial pits carried out by IGSL in 2015. 1.2 Peat Condition in Trial Pits Dry/ Stands well Slowly squeezing 1 1 1 Stands Well Undiggable Subsoil Characteristics 1.3 Subsoil Type Gravel/ Firm Smooth Rock Soft Sensitive 3 3 Trial pits carried out by IGSL in 2015. 1 Sandy gravelly silf Glacial Till Clay Trial pits carried out by IGSL in 2015. 1.4 Peat fibres continuous across transition to subsoil Partially 1 1 1 Yes Yes No 2.0 Topography Situation 2.1 Elevation OD [m] 350m <200m >200m 3 3 From LiDar 1 2.2 Slope Aspect SE SW, S, SE W, E NW, N, NE 1 1 1 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 3 2 6 From LiDar. Worst case assumed. 3° - 7° <3° >7° 3° - 7° Geomorphology 2.4 General slope characteristics downslope Planar Concave Planar Convex 2 1 2 From LiDar 2.5 Distance from break in slope 50-100m 2 1 2 From LiDar 50-100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 3 1 3 From LiDar < 200m < 200m 3.3 Surface water Springs/ 1 1 1 Localised Localised Ponded in drains Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope Across slope 2 1 2 Varied Varied / Oblique From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 4.2 Forestry (if applicable) N/A 0 1.5 0 From aerial photography and site walk Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality > 5km > 5km < 5km On site 1 2 2 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use Machine Cut 4.5 Peat Workings None Cutaway/Turbary 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 44 Total Likelihood Score Scale Max Possible 72 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.61 0.5-0.7 Medium 3 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar Valley 3 1 3 Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 3 1 3 From LiDar <200m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No 5.8 Buildings in potential peat flow path 1 1 1 No No Farm out-houses Dwelling From aerial photography and site walk 5.9 Capability to respond (access and resources) Good Good Fair Poor 1 1 1 Based on contractor facilities on site during construction. Impact Rating 21 Total Impact Score Scale Max Possible 33 0.0-0.3 Negligible 1





Grousemount Wind Farm

 Location:
 Borrow Pit C

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

Date: **Borrow Pit C** Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth 0.2 - 1.3m Based on peat probes and site investigation carried out by IGSL in 2015. <1m 2 6 >3m 1-3m 3 Extremely Wet Trial pits carried out by IGSL in 2015. 1.2 Peat Condition in Trial Pits Dry/ Stands well Slowly squeezing 1 1 1 Stands Well Undiggable Subsoil Characteristics Gravel/ Firm 1.3 Subsoil Type Gravelly clay Smooth Rock Soft Sensitive 3 3 Trial pits carried out by IGSL in 2015. 1 possible bedroc Glacial Till Clay 1.4 Peat fibres continuous across transition to subsoil Trial pits carried out by IGSL in 2015. Partially 1 1 1 Yes No Yes 2.0 Topography Situation 2.1 Elevation OD [m] 350m <200m >200m 3 3 From LiDar 1 2.2 Slope Aspect SE SW, S, SE W, E NW, N, NE 1 1 1 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 3 2 6 From LiDar. Worst case assumed. >7° 3° - 7° 0° - >10° <3° Geomorphology 2.4 General slope characteristics downslope Planar Concave Planar Convex 2 1 2 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 3 1 3 From LiDar < 200m < 200m 3.3 Surface water Springs/ 1 1 1 Localised Localised Ponded in drains Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope 2 1 2 Varied Varied / Oblique Across slope From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 4.2 Forestry (if applicable) N/A 0 1.5 0 From aerial photography and site walk Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality > 5km > 5km < 5km On site 1 2 2 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use Machine Cut 4.5 Peat Workings None Cutaway/Turbary 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 47 Total Likelihood Score Scale Max Possible 72 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.65 0.5-0.7 Medium 3 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar Valley 3 1 3 Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 3 1 3 From LiDar <200m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No 5.8 Buildings in potential peat flow path 1 1 1 No No Farm out-houses Dwelling From aerial photography and site walk 5.9 Capability to respond (access and resources) Good Good Fair Poor 1 1 1 Based on contractor facilities on site during construction. Impact Rating 21 Total Impact Score Scale



Max Possible

33

0.0-0.3

0.3-0.5

Negligible

Low



5.8 Buildings in potential peat flow path

Impact Rating

5.9 Capability to respond (access and resources)

No

Good

No

Good

Farm out-houses

Fair

Dwelling

Poor

## Peat Stability Risk Assessment

Grousemount Wind Farm

 Location:
 Borrow Pit D

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

August 2015 Date: Borrow Pit D Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth Based on peat probes and site investigation carried out by IGSL in 2015. 0.9m <1m 2 6 >3m 1-3m 3 Extremely Wet Trial pits carried out by IGSL in 2015. 1.2 Peat Condition in Trial Pits Dry/ Stands well Slowly squeezing 1 1 Stands well 1 Undiggable Subsoil Characteristics 1.3 Subsoil Type Gravel/ Firm Smooth Rock Soft Sensitive Trial pits carried out by IGSL in 2015. 1 1 1 Silty gravel Glacial Till Clay Trial pits carried out by IGSL in 2015. 1.4 Peat fibres continuous across transition to subsoil Partially 2 1 2 Partially Yes No 2.0 Topography Situation 2.1 Elevation OD [m] 380m <200m >200m 3 3 From LiDar 1 2.2 Slope Aspect SE SW, S, SE W, E NW, N, NE 1 1 1 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 3 2 6 From LiDar. Worst case assumed. >7° 3° - 7° 0° - >10° <3° Geomorphology 2.4 General slope characteristics downslope Planar Concave Planar Convex 2 1 2 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 1 1 1 From LiDar > 300m < 200m 3.3 Surface water Springs/ 1 1 1 Localised Localised Ponded in drains Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope Across slope 2 1 2 Varied Varied / Oblique From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 4.2 Forestry (if applicable) N/A 0 1.5 0 From aerial photography and site walk Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality > 5km > 5km < 5km On site 1 2 2 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use Machine Cut 4.5 Peat Workings None Cutaway/Turbary 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 44 Total Likelihood Score Scale Max Possible 66 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.67 0.5-0.7 Medium 3 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar 3 1 3 Valley Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 2 1 2 From LiDar 200-500m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No



1

1

1

1

Total

Max Possible

1

1

20

33

From aerial photography and site walk

Based on contractor facilities on site during construction.

0.0-0.3

0.3-0.5

Impact Score

Negligible

Low

Scale



Grousemount Wind Farm

 Location:
 Borrow Pit E

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

Borrow Pit E Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth 0.1 - 1.2m Based on peat probes and site investigation carried out by IGSL in 2015. <1m 2 6 >3m 1-3m 3 Extremely Wet Trial pits carried out by IGSL in 2015. 1.2 Peat Condition in Trial Pits Dry/ Stands well Slowly squeezing 1 1 1 Stands Well Undiggable Subsoil Characteristics Gravelly silt / Gravel/ Firm 1.3 Subsoil Type Smooth Rock Soft Sensitive 1 Trial pits carried out by IGSL in 2015. 1 1 gravel / rock Glacial Till Clay 1.4 Peat fibres continuous across transition to subsoil Trial pits carried out by IGSL in 2015. Partially 1 1 1 Yes No Yes 2.0 Topography Situation 2.1 Elevation OD [m] 480m <200m >200m 3 From LiDar 3 1 2.2 Slope Aspect NW, N, NE SW, S, SE W, E NW, N, NE 3 1 3 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 3 2 6 From LiDar. Worst case assumed. >7° 3° - 7° 3° - >10° <3° Geomorphology 2.4 General slope characteristics downslope Planar Concave Planar Convex 2 1 2 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 1 1 1 From LiDar > 300m < 200m 3.3 Surface water Springs/ 1 1 1 Localised Localised Ponded in drains Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope Across slope 2 1 2 Varied Varied / Oblique From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 4.2 Forestry (if applicable) N/A 0 1.5 0 From aerial photography and site walk Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality > 5km > 5km < 5km On site 1 2 2 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use Machine Cut 4.5 Peat Workings None Cutaway/Turbary 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 45 Total Likelihood Score Scale 72 Max Possible 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.5-0.7 Medium 3 0.63 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar Valley 3 1 3 Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 3 1 3 From LiDar <200m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No 5.8 Buildings in potential peat flow path 1 1 1 No No Farm out-houses Dwelling From aerial photography and site walk 5.9 Capability to respond (access and resources) Good Good Fair Poor 1 1 1 Based on contractor facilities on site during construction. Impact Rating 21 Total Impact Score Scale



Max Possible

33

0.0-0.3

0.3-0.5

Negligible

Low



Grousemount Wind Farm

 Location:
 Borrow Pit F

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

Borrow Pit F Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth 0.3 - 0.7m 2 Based on peat probes and site investigation carried out by IGSL in 2015. <1m 2 >3m 1-3m 1 Extremely Wet Trial pits carried out by IGSL in 2015. 1.2 Peat Condition in Trial Pits Dry/ Stands well 1 1 1 Stands Well Slowly squeezing Undiggable Subsoil Characteristics Soft sandy Gravel/ Firm 1.3 Subsoil Type Smooth Rock Soft Sensitive 3 3 Trial pits carried out by IGSL in 2015. 1 gravelly sil Glacial Till Clay 1.4 Peat fibres continuous across transition to subsoil Trial pits carried out by IGSL in 2015. Partially 1 1 1 Yes No Yes 2.0 Topography Situation 2.1 Elevation OD [m] 375m <200m >200m 3 From LiDar 3 1 2.2 Slope Aspect NW, N SW, S, SE W, E NW, N, NE 3 1 3 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 2 2 4 From LiDar. Worst case assumed. >7° 3° - 7° >10° <3° Geomorphology 2.4 General slope characteristics downslope Convex Concave Planar Convex 3 1 3 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 3 1 3 From LiDar < 200m < 200m 3.3 Surface water Springs/ 1 1 1 Localised Localised Ponded in drains Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope 2 1 2 Varied Varied / Oblique Across slope From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 From aerial photography and site walk 4.2 Forestry (if applicable) N/A 0 1.5 0 Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality > 5km > 5km < 5km On site 1 2 2 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use Machine Cut 4.5 Peat Workings None Cutaway/Turbary 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 44 Total Likelihood Score Scale Max Possible 72 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.61 0.5-0.7 Medium 3 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar Valley 3 1 3 Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 3 1 3 From LiDar <200m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No 5.8 Buildings in potential peat flow path 1 1 1 No No Farm out-houses Dwelling From aerial photography and site walk 5.9 Capability to respond (access and resources) Good Good Fair Poor 1 1 1 Based on contractor facilities on site during construction. Impact Rating 21 Total Impact Score Scale Max Possible 33 0.0-0.3 Negligible 1 Low 0.3-0.5





Grousemount Wind Farm

 Location:
 Borrow Pit G

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

August 2015 Date: Borrow Pit G Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth 0.2 - 1.2m Based on peat probes and site investigation carried out by IGSL in 2015. <1m 2 6 >3m 1-3m 3 Extremely Wet Trial pits carried out by IGSL in 2015. 1.2 Peat Condition in Trial Pits Dry/ Stands well 1 1 1 Stands Well Slowly squeezing Undiggable Subsoil Characteristics Soft sandy Gravel/ Firm 1.3 Subsoil Type Smooth Rock Soft Sensitive 3 3 Trial pits carried out by IGSL in 2015. 1 gravelly sil Glacial Till Clay 1.4 Peat fibres continuous across transition to subsoil Trial pits carried out by IGSL in 2015. Partially 1 1 1 Yes No Yes 2.0 Topography Situation 2.1 Elevation OD [m] 450m <200m >200m 3 3 From LiDar 1 2.2 Slope Aspect SW SW, S, SE W, E NW, N, NE 1 1 1 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 2 2 4 From LiDar. Worst case assumed. >7° 3° - 7° >10° <3° Geomorphology 2.4 General slope characteristics downslope Planar Concave Planar Convex 2 1 2 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 3 1 3 From LiDar < 200m < 200m 3.3 Surface water Springs/ 1 1 1 Localised Localised Ponded in drains Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope 2 1 2 Varied Varied / Oblique Across slope From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 4.2 Forestry (if applicable) N/A 0 1.5 0 From aerial photography and site walk Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality > 5km > 5km < 5km On site 1 2 2 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use Machine Cut 4.5 Peat Workings None Cutaway/Turbary 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 45 Total Likelihood Score Scale Max Possible 72 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.5-0.7 Medium 3 0.63 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar Valley 3 1 3 Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 3 1 3 From LiDar <200m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No 5.8 Buildings in potential peat flow path 1 1 1 No No Farm out-houses Dwelling From aerial photography and site walk 5.9 Capability to respond (access and resources) Good Good Fair Poor 1 1 1 Based on contractor facilities on site during construction. Impact Rating



21

33

Impact Score

Negligible

Low

0.0-0.3

0.3-0.5

Scale

1

Total

Max Possible



5.9 Capability to respond (access and resources)

Impact Rating

Good

Good

Fair

Poor

1

1

Total

Max Possible

1

20

33

Based on contractor facilities on site during construction.

0.0-0.3

0.3-0.5

Impact Score

Negligible

Low

Scale

1

# Peat Stability Risk Assessment

Grousemount Wind Farm

 Location:
 Borrow Pit H

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

August 2015 Date: **Borrow Pit H** Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth 0.5 - 0.8m 2 Based on peat probes and site investigation carried out by IGSL in 2015. <1m 2 >3m 1-3m 1 Extremely Wet Trial pits carried out by IGSL in 2015. 1.2 Peat Condition in Trial Pits Dry/ Stands well 1 1 1 Stands Well Slowly squeezing Undiggable Subsoil Characteristics Soft sandy Gravel/ Firm 1.3 Subsoil Type Smooth Rock Soft Sensitive 3 3 Trial pits carried out by IGSL in 2015. 1 gravelly silty cla Glacial Till Clay 1.4 Peat fibres continuous across transition to subsoil Trial pits carried out by IGSL in 2015. Partially 1 1 1 Yes No Yes 2.0 Topography Situation 2.1 Elevation OD [m] 400m <200m >200m 3 From LiDar 3 1 2.2 Slope Aspect NE SW, S, SE W, E NW, N, NE 3 1 3 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 3 2 6 From LiDar. Worst case assumed. >7° 3° - 7° 0° - >10° <3° Geomorphology 2.4 General slope characteristics downslope Convex Concave Planar Convex 3 1 3 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse 200 - 300m 200 - 300m 2 1 2 From LiDar > 300m < 200m 3.3 Surface water Springs/ 1 1 Localised Localised Ponded in drains 1 Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope 2 1 2 Varied Varied / Oblique Across slope From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 4.2 Forestry (if applicable) N/A 0 1.5 0 From aerial photography and site walk Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality > 5km > 5km < 5km On site 1 2 2 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use Machine Cut 4.5 Peat Workings None Cutaway/Turbary 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 45 Total Likelihood Score Scale 72 Max Possible 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.5-0.7 Medium 3 0.63 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar 3 1 3 Valley Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 2 1 2 From LiDar 200-500m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No 5.8 Buildings in potential peat flow path 1 1 No No Farm out-houses Dwelling 1 From aerial photography and site walk





Grousemount Wind Farm

 Location:
 Borrow Pit I

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

Date: Borrow Pit I Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 1 2 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth Based on peat probes and site investigation carried out by IGSL in 2015. <1m <1m 2 2 >3m 1-3m 1 Extremely Wet Trial pits carried out by IGSL in 2015. 1.2 Peat Condition in Trial Pits Dry/ Stands well 2 2 Slowly squeezing Slowly squeezing 1 Undiggable Subsoil Characteristics Soft slightly Gravel/ Firm Soft Sensitive 1.3 Subsoil Type Smooth Rock 3 3 Trial pits carried out by IGSL in 2015. 1 gravelly silt Glacial Till Clay Trial pits carried out by IGSL in 2015. 1.4 Peat fibres continuous across transition to subsoil Partially 1 1 1 Yes No Yes 2.0 Topography Situation 2.1 Elevation OD [m] 380m <200m >200m 3 From LiDar 3 1 2.2 Slope Aspect NW SW, S, SE W, E NW, N, NE 3 1 3 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 3 2 6 From LiDar. Worst case assumed. >7° 3° - 7° 0° - >10° <3° Geomorphology 2.4 General slope characteristics downslope Planar Concave Planar Convex 2 1 2 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 3 1 3 From LiDar < 200m < 200m 3.3 Surface water Springs/ 1 1 Localised Localised Ponded in drains 1 Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope 2 1 2 Varied Varied / Oblique Across slope From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 From aerial photography and site walk 4.2 Forestry (if applicable) N/A 0 1.5 0 Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality < 5km > 5km < 5km On site 2 2 4 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use 4.5 Peat Workings None Cutaway/Turbary Machine Cut 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sun Likelihood Rating 48 Total Likelihood Score Scale Max Possible 72 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.67 0.5-0.7 Medium 3 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar Valley 3 1 3 Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 3 1 3 From LiDar <200m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No 5.8 Buildings in potential peat flow path 1 1 1 No No Farm out-houses Dwelling From aerial photography and site walk 5.9 Capability to respond (access and resources) Good Good Fair Poor 1 1 1 Based on contractor facilities on site during construction. Impact Rating 21 Total Impact Score Scale



Max Possible

33

0.0-0.3

0.3-0.5

Negligible

Low





Grousemount Wind Farm

 Location:
 Anemometer Mast 2

 Inspected on:
 2015

 Inspected by:
 ESBI / BLP

 Completed by:
 SS

 Date:
 August 2015

Anemometer Mast 2 Rating Likelihood/ Impact Factors Value Rating Value Weighting Score Comment No. 2 1 LIKELIHOOD 1.0 Ground Conditions Peat 1.1 Peat Depth 2 Based on peat probes and site investigation carried out by IGSL in 2015. 1.9m <1m 6 >3m 1-3m 3 Extremely Wet 1.2 Peat Condition in Trial Pits Dry/ Stands well 2 1 2 Trial pits carried out by IGSL in 2015. Slowly squeezing Slowly squeezing Undiggable Subsoil Characteristics Medium dense Gravel/ Firm Soft Sensitive 1.3 Subsoil Type Smooth Rock 1 Trial pits carried out by IGSL in 2015. 1 1 angular gravel Glacial Till Clay Trial pits carried out by IGSL in 2015. 1.4 Peat fibres continuous across transition to subsoil Partially 2 1 2 Partially Yes No 2.0 Topography Situation 2.1 Elevation OD [m] 410m <200m >200m 3 3 From LiDar 1 2.2 Slope Aspect NW SW, S, SE W, E NW, N, NE 3 1 3 From LiDar Slope Angle 2.3 Slope Angle - Ground Surface 3 2 6 From LiDar. Worst case assumed. >7° 3° - 7° 0° - >10° <3° Geomorphology 2.4 General slope characteristics downslope Planar Concave Planar Convex 2 1 2 From LiDar 2.5 Distance from break in slope 50-100m 1 1 1 From LiDar >100m > 100m < 50m 3.0 Hydrology Hydrology 3.1 In broad valley upslope from defined watercourse From LiDar No 3 1 3 Yes, slopes ≥ 3<sup>c</sup> Yes, slopes < 3° Yes, slopes ≥ 3° 3.2 Distance from head of defined watercourse > 300m 200 - 300m 3 1 3 From LiDar < 200m < 200m 3.3 Surface water Springs/ 1 1 1 Localised Localised Ponded in drains Surface Wate 3.4 Evidence of piping 1 1 1 From site walk No No Yes 3.5 Existing drainage ditches Down slope 2 1 2 Varied Varied / Oblique Across slope From Met Éireann. Based on average rainfall from 1985 - 2014 3.6 Annual Rainfall >1400 mm/vr 3 1 3 >1400 mm/yr <1000 mm/yr 1000-1400 mm/yr 4.0 Other Factors Vegetation 4.1 Vegetation Grasslands 2 From aerial photography and site walk Dry Heather Grasslands Wetlands 2 1 4.2 Forestry (if applicable) N/A 0 1.5 0 From aerial photography and site walk Good Growth Fair Stunted Growth Slide History From Geological Survey of Ireland. Fuhiry Landslie occurred within 5km north 4.3 Previous slides in locality > 5km > 5km < 5km On site 1 2 2 east of the site in 1997 (GSI Event ID #91). 4.4 Evidence of movement in peat (e.g. tension cracks, step 1 1 1 No No From site walk Yes features, compression features) Land Use Cutaway/Turbary Machine Cut 4.5 Peat Workings None 1 1 From aerial photography and site walk None 1 Other Factors 4.6 Existing roads in place Solid Road Solid Road Floating Road 1 1 1 No existing road. Value assumed. Winter / Early Late Summer Late Summer/ 4.7 Time of year for construction 3 1 3 Worst case assumed. Spring Autumn Autumn Sum Likelihood Rating 49 Total Likelihood Score Scale 72 Max Possible 0.0-0.3 Negligible 1 0.3-0.5 Low Likelihood 0.5-0.7 Medium 3 0.68 4 IMPACT 5.0 Impact Factors Small volume Medium Potential for Bog 5.1 Volume of peat in potential peat flow Medium 2 3 6  $(<1.000m^{3})$ (1,000 -Minor undefined burst 5.2 Downslope features From LiDar Valley 3 1 3 Bowl/ contained Valley watercourse 5.3 Proximity to defined valley 3 1 3 From LiDar <200m >500m 200-500m <200m 5.4 Valley profile Steep Flat Steep 3 1 3 From LiDar Intermediate Drinking wate 5.5 Downstream aquatic environment 2 1 2 Sensitive Non-sensitive Sensitive supply 5.6 Public roads in potential peat flow path 1 1 1 From aerial photography and site walk No Local Road No Regional Road 5.7 Overhead lines in potential peat flow path Phone Lines 1 1 1 From service drawings and site walk Electricity, LV Electricity MV, HV No 5.8 Buildings in potential peat flow path 1 1 1 No No Farm out-houses Dwelling From aerial photography and site walk 5.9 Capability to respond (access and resources) Good Good Fair Poor 1 1 1 Based on contractor facilities on site during construction. Impact Rating 21 Total Impact Score Scale



Max Possible

33

0.0-0.3

0.3-0.5

Negligible

Low



