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generations

Derrybrien Wind Farm Project

Gort Windfarms Ltd.

Remedial Environmental Impact Assessment Report Chapter 7 - Biodiversity (Terrestrial Ecology) Appendices

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Appendix 7-1 Rare and/or Protected Species within the 10 km Grid Squares M50 and M60

Species name	Grid Square	Record count	Date of last record	Title of dataset
Common Frog (<i>Rana temporaria</i>)	M50	1	17/07/2015	Amphibians and reptiles of Ireland
Smooth Newt (<i>Lissotriton vulgaris</i>)	M50	1	17/07/2015	Amphibians and reptiles of Ireland
Bank Vole (<i>Myodes glareolus</i>)	M50	1	04/01/2015	Atlas of Mammals in Ireland 2010-2015
Daubenton's Bat (<i>Myotis daubentonii</i>)	M50	1	15/09/2009	National Bat Database of Ireland
Eurasian Badger (<i>Meles meles</i>)	M50	26	31/12/2012	Badger Setts of Ireland Database
Eurasian Red Squirrel (<i>Sciurus vulgaris</i>)	M50	9	26/12/2014	Atlas of Mammals in Ireland 2010-2015
Fallow Deer (<i>Dama dama</i>)	M50	5	17/07/2015	Atlas of Mammals in Ireland 2010-2015
Irish Hare (<i>Lepus timidus subsp. hibernicus</i>)	M50	3	26/12/2014	Atlas of Mammals in Ireland 2010-2015
Irish Stoat (<i>Mustela erminea subsp. hibernica</i>)	M50	1	04/08/2010	Atlas of Mammals in Ireland 2010-2015
Lesser Noctule (<i>Nyctalus leisleri</i>)	M50	2	15/09/2009	National Bat Database of Ireland
Pine Marten (<i>Martes martes</i>)	M50	8	17/07/2015	Atlas of Mammals in Ireland 2010-2015
Pipistrelle (<i>Pipistrellus pipistrellus sensu lato</i>)	M50	2	15/09/2009	National Bat Database of Ireland
Sika Deer (<i>Cervus nippon</i>)	M50	4	17/07/2015	Atlas of Mammals in Ireland 2010-2015

Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	M50	2	15/09/2009	National Bat Database of Ireland
West European Hedgehog (<i>Erinaceus europaeus</i>)	M50	1	26/12/2014	Atlas of Mammals in Ireland 2010-2015
Wood Mouse (<i>Apodemus sylvaticus</i>)	M50	2	17/07/2015	Atlas of Mammals in Ireland 2010-2015
Common Frog (<i>Rana temporaria</i>)	M60	1	04/02/2018	Amphibians and reptiles of Ireland
Smooth Newt (<i>Lissotriton vulgaris</i>)	M60	2	22/10/2012	Newt Survey 2010-2014
Eurasian Badger (<i>Meles meles</i>)	M60	22	27/10/2016	Mammals of Ireland 2016-2025
Eurasian Red Squirrel (<i>Sciurus vulgaris</i>)	M60	16	19/10/2017	Mammals of Ireland 2016-2025
European Otter (<i>Lutra lutra</i>)	M60	3	06/10/2015	Atlas of Mammals in Ireland 2010-2015
Fallow Deer (<i>Dama dama</i>)	M60	4	22/04/2014	Atlas of Mammals in Ireland 2010-2015
Irish Hare (<i>Lepus timidus subsp. hibernicus</i>)	M60	4	18/08/2015	Atlas of Mammals in Ireland 2010-2015
Pine Marten (<i>Martes martes</i>)	M60	11	24/05/2015	Atlas of Mammals in Ireland 2010-2015
Sika Deer (<i>Cervus nippon</i>)	M60	1	18/06/2013	Atlas of Mammals in Ireland 2010-2015
West European Hedgehog (<i>Erinaceus europaeus</i>)	M60	4	07/06/2017	Mammals of Ireland 2016-2025

Appendix 7-2 Hen Harrier Definition of Habitat and Behaviour codes

Hen Harrier Survey - Classification of habitat types

NF 2	New forestry plantation, trees 20-30 cm high
NF 3	New forestry plantation, trees c 1m in height
NF 4	New forestry plantation, trees >2m in height, patchy thickets
2nd F 1 & 2	2nd rotation forestry plantation, trees 20-30 cm high
2nd F 3	New forestry plantation, trees c 1m in height
2nd F 4	New forestry plantation, trees >2m in height, patchy thickets
F	Post thicket plantation
G	Grazing
RG	Rough Grazing & rushy pasture
HB	Heath / Bog
DE	Deciduous woodland & scrub
GO	Gorse
CF	Clearfell
H	Hedgerow

Categories for activity and behaviour of observed birds

c - circling
d - displaying
fl - flying
fp - foodpass
g - on ground
gl - gliding
h - hunting
p - perching
s - soaring
wp - with prey
fp - foodpass

Appendix 7-3 Photographs Relating to Hen Harriers



Plate 1. View looking eastwards of unplanted cutover bog in eastern section of site. Hen harriers have been recorded foraging over this area of the wind farm (April 2018).



Plate 2. Much of the area that was clear-felled has regenerated with bog vegetation and attracts foraging hen harriers (April 2018).



Plate 3. Good growth of heather is often found along the road edges – this provides useful foraging habitat for hen harriers and also attracts red grouse (April 2018).



Plate 4. View of overhead line corridor, May 2018. The clearance of conifers has allowed regeneration of bog and heath vegetation, with scrub patches – this provides useful foraging habitat for hen harriers.



Plate 5. View of peat slide area to south of wind farm (September 2011). The regrowth since the slide occurred in 2003 provides suitable foraging habitat for hen harrier.



Plate 6. View of peat slide area to south of wind farm (September 2011). The regrowth is a mix of bog and heath vegetation, with self-seeded conifers becoming establish. This provides suitable foraging habitat for hen harrier.



Plate 7. View of clear fell to north of wind farm entrance (May 2018) – the second rotation conifer crop will provide suitable habitat for hen harrier from approximately 2020 to 2030 period.

Appendix 7-4 Details of bat detector deployments and total number of bat passes for 2016 (Tables 1-2) and 2019 (Tables 3-4)

Table 1: Details of static bat detector deployment in 2016

Turbine Location	Latitude	Longitude	April	May	June	July	August
T5	53.091808	-8.6241174	20-24/04/2016	20-24/05/2016	03-07/06/2016	27-31/07/2016	01-05/08/2016
T11	53.092272	-8.6128736	20-24/04/2016	20-24/05/2016	03-07/06/2016	01-05/07/2016	01-05/08/2016
T13	53.086936	-8.6232162	20-24/04/2016	20-24/05/2016	03-07/06/2016	01-05/07/2016	01-03/08/2016
T15	53.088741	-8.6175084	20-22/04/2016 27-29/04/2016	20-24/05/2016	03-07/06/2016	27-31/07/2016	01-05/08/2016
T17	53.090313	-8.6110282	20-24/04/2016	20-22/05/2016	03-07/06/2016	01-05/07/2016	01-05/08/2016
T18	53.084101	-8.6244607	20-24/04/2016	20-22/05/2016	03-07/06/2016	01-05/07/2016	01-05/08/2016
T21	53.086730	-8.6154485	20-22/04/2016 27-29/04/2016	20-24/05/2016	03-03/06/2016 23-24/06/2016	27-31/07/2016	01-05/08/2016
T27	53.096550	-8.6007285	20-24/04/2016	20-24/05/2016	03-07/06/2016	01-05/07/2016	01-05/08/2016
T32	53.092478	-8.5938191	20-24/04/2016 27-29/04/2016	20-23/05/2016	03-07/06/2016	01-05/07/2016	01-05/08/2016
T33	53.098096	-8.5948491	20-24/04/2016 27-29/04/2016	20-24/05/2016	03-07/06/2016	01-05/07/2016	01-05/08/2016
T41	53.094797	-8.5859227	20-24/04/2016	20-24/05/2016	03-07/06/2016	27-31/07/2016	01-05/08/2016
T54	53.096472	-8.6180663	20-24/04/2016	20-23/05/2016	N/A	01-05/07/2016	01-05/08/2016
T59	53.093612	-8.6193109	20-24/04/2016	20-24/05/2016	03-07/06/2016	01-05/07/2016	N/A
T62	53.096472	-8.6097407	20-21/04/2016 27-29/04/2016	20-22/05/2016	03-07/06/2016 23-26/06/2016	N/A	01-05/08/2016
T65	53.098405	-8.6005998	27/04/2016- 02/05/2016	20-22/05/2016	03-07/06/2016	29-31/07/2016	01-05/08/2016
T67	53.094179	-8.6067367	20-21/04/2016 27-29/04/2016	20-22/05/2016	03-05/06/2016 23-25/06/2016	01-05/07/2016	N/A

Turbine Location	Latitude	Longitude	April	May	June	July	August
T70	53.089024	-8.6051488	20-21/04/2016 27-29/04/2016	20-24/05/2016	03-07/06/2016	01-05/07/2016	01-05/08/2016
T71	53.089849	-8.6022735	20-24/04/2016	20-22/05/2016	03-05/06/2016 23-25/06/2016	01-05/07/2016	N/A

Table 2: Number of bat passes recorded during automated surveys (April-August 2016)

Bat species	T5	T11	T13	T15	T17	T18	T21	T27	T32	T33	T41	T54	T59	T62	T65	T67	T70	T71	Total
Common / Nathusius' pipistrelle	1	5	2	2				17	10	1	1				3		27	13	82
Common pipistrelle	79	118	57	33	3	125	9	165	428	382	548	7	6	1	233	14	273	270	2751
Common / Soprano pipistrelle						1				2	42				3		1		49
Soprano pipistrelle	10	2	7	6	6	7	2	15	24	36	118	3		1	81		21	21	360
<i>Myotis</i> species	2	20	2	1	15	14	4	4	9	2	2	3	1		3	6	7	2	97
<i>Myotis</i> / Long-eared bat sp.									2	1									3
Long eared bat sp.	2	2	1	1		6		1	1		2						4		20
Leisler's bat	236	373	126	106	683	735	836	1290	71	1697	69	355	63	35	470	55	1424	1123	9747
Total	330	520	195	149	707	888	851	1492	545	2121	782	368	70	37	793	75	1757	1429	13109

Table 3: Details of static bat detector deployment 2019

Turbine Location	Latitude	Longitude	Deployment date	Collection date	Number of nights recorded
T5	53.09195	-8.62396	29/08/2019	10/09/2019	10
T15	53.08865	-8.61737	29/08/2019	05/09/2019	7.5
T18	53.08398	-8.62435	29/08/2019	10/09/2019	10
T32	53.0925	-8.59359	29/08/2019	10/09/2019	10
T33	53.09819	-8.5946	29/08/2019	10/09/2019	10
T53	53.09639	-8.61792	29/08/2019	10/09/2019	10
T62	53.09654	-8.6097	29/08/2019	10/09/2019	10
T65	53.09851	-8.60054	29/08/2019	10/09/2019	10
T67	53.09424	-8.60684	29/08/2019	10/09/2019	10
T71	53.08982	-8.60207	29/08/2019	10/09/2019	10
T2	53.09292	-8.62818	10/09/2019	24/09/2019	10
T13	53.08701	-8.62311	10/09/2019	24/09/2019	10
T17	53.09013	-8.61096	10/09/2019	24/09/2019	10
T28	53.09383	-8.59785	10/09/2019	24/09/2019	10
T38	53.09402	-8.58852	10/09/2019	24/09/2019	10
T44	53.09958	-8.58225	10/09/2019	24/09/2019	10
T49	53.09877	-8.61697	10/09/2019	24/09/2019	10
T56	53.09786	-8.61264	10/09/2019	24/09/2019	10

Turbine Location	Latitude	Longitude	Deployment date	Collection date	Number of nights recorded
T58	53.09933	-8.606	10/09/2019	13/09/2019	4
T59	53.0933	-8.61921	10/09/2019	24/09/2019	10
T69	53.09192	-8.60493	10/09/2019	24/09/2019	10
T3	53.09012	-8.62996	24/09/2019	08/10/2019	10
T8	53.09022	-8.62116	24/09/2019	08/10/2019	10
T11	53.09246	-8.61283	24/09/2019	08/10/2019	10
T21	53.08664	-8.61524	24/09/2019	08/10/2019	10
T27	53.09661	-8.6007	24/09/2019	08/10/2019	10
T37	53.09637	-8.58861	24/09/2019	08/10/2019	10
T39	53.09946	-8.58911	24/09/2019	08/10/2019	10
T47	53.09712	-8.62329	24/09/2019	08/10/2019	10
T51	53.10048	-8.61144	24/09/2019	08/10/2019	10
T70	53.08903	-8.60499	24/09/2019	08/10/2019	10
T41	53.09499	-8.58586	24/09/2019	08/10/2019	10

Table 4: Number of bat passes recorded during automated surveys 2019

Turbine Location	Nathusius' pipistrelle	Common / Nathusius' pipistrelle	Common pipistrelle	Common / Soprano pipistrelle	Soprano pipistrelle	Myotis sp.	Myotis / Long-eared bat sp.	Long eared bat sp.	Leisler's bat	Unidentified bat species	Total
T11			23	2	9	5		1	10		50
T13		14	533	48	83	5	2	2	78	3	768
T15					3	3	1		2		9
T17		23	392	73	82	8	8	10	211	5	812
T18		25	483	114	93	10	4	5	29	30	793
T2		20	2463	258	776	20	2	17	265	15	3836
T21		8	379	9	49	5		4	16	1	471
T27			66	4	4	1			30		105
T28	6	5	193	256	97	7	6	10	161	5	746
T3		4	65		5	35		2	9		120
T32		1	527	181	148	288	17	5	5	12	1184
T33	1	1	115	13	63	29	11	10	7	4	254
T37		1	5	2	2	3			7		20
T38		25	811	153	263	21	7	11	283	15	1589
T39			12	1	3				2		18
T41			21	4	3	2		2	1		33

Turbine Location	Nathusius' pipistrelle	Common / Nathusius' pipistrelle	Common pipistrelle	Common / Soprano pipistrelle	Soprano pipistrelle	Myotis sp.	Myotis / Long-eared bat sp.	Long eared bat sp.	Leisler's bat	Unidentified bat species	Total
T44		14	374	73	79	4	38	5	63	3	653
T47		4	21	3	12	4		3	16		63
T49		14	428	95	402	13	9	9	224	3	1197
T5		1	166	7	54	23	5	4	9	1	270
T51			6	1		4					11
T54			58		13	6	4	3	13	1	98
T56		2	123	26	56	17	3	11	135		373
T58			71	2	30	4	2	2	33		144
T59		5	108	28	35	11	4	8	75		274
T62			5		3	10	4	2	1	2	27
T65			93	7	62	15	3	11	17	23	231
T67			15	5	5	10	3		3	1	42
T69		18	723	90	475	12	7	14	294	139	1772
T70		2	70	12	34	8		2	11	2	141
T71			35	4	26	4	4	3	20	33	129
T8		2	13	2	2	3			9		31
Total	7	189	8397	1473	2971	590	144	156	2039	298	16264

Appendix 7-5 – A3 Figures

See Vol 2 Section 3 for A3 figures