



APPENDIX 7-6

SUPPLEMENTARY SURVEY DATA

Appendix 7-6 – Supplementary Survey Data

Glenard Wind Farm





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Table 1 Survey Effort

Survey	Location	Date	Time	Duration (hrs)	Cloud cover	Temp	Visibility (km)	Wind speed	Wind Direction	Rain
Vantage Point	VP1	28/10/2019	12.35-15.35	3	5/5	3	3	1	N	0
Vantage Point	VP1	01/11/2019	8.10-11.10	3	3/8	5	3	2	NE	0
Vantage Point	VP1	23/11/2019	08:45 - 11:45	3	6/8	8	3	1	ENE	0
Vantage Point	VP1	23/11/2019	11:45 - 14:45	3	7/8	8	3	2	ENE	0
Vantage Point	VP1	14/12/2019	12:15 - 15:15	3	8/8	5	2	4	SW	CHR
Vantage Point	VP1	23/12/2019	09:10 - 12:10	3	6/8	6	3	3	W	0
Vantage Point	VP1	30/12/2019	09:20 - 12:20	3	7/8	8	2	2	SSW	ILR
Vantage Point	VP1	21/01/2020	10:22 - 13:25	3	8/8	8	3	2	SW	0
Vantage Point	VP1	23/01/2020	1000 - 13:00	3	7/8	8	3	2	SW	0
Vantage Point	VP1	27/01/2020	12:55 - 15:55	3	3/8	6	3	2	SW	0
Vantage Point	VP1	04/03/2020	11:15 - 14:25	3	1/8	3	3	2	SW	0
Vantage Point	VP1	06/03/2020	08:50 - 11:50	3	7/8	12	3	2	SW	0
Vantage Point	VP2	28/10/2019	09.10-12.15	3	2/8	2	3	1	N	0
Vantage Point	VP2	01/11/2019	12.15-15.15	3	5/8	6	3	2	NE	0
Vantage Point	VP2	25/11/2019	09:15 - 12:15	3	7/8	9	3	1	ENE	0
Vantage Point	VP2	25/11/2019	12:15 - 15:15	3	8/9	9	3	2	ENE	0
Vantage Point	VP2	26/11/2019	11:40 - 14:40	3	8/8	9	2	1	SE	ILR
Vantage Point	VP2	11/12/2019	09:30 - 12:30	3	7/8	2	3	2	SSW	0
Vantage Point	VP2	14/12/2019	08:55 - 11:55	3	8/8	5	2	4	SW	ILR
Vantage Point	VP2	28/12/2019	09:15 - 12:15	3	8/8	8	2	3	SE	PHR
Vantage Point	VP2	09/01/2020	10:03 - 13:03	3	7/8	5	3	1	SW	0
Vantage Point	VP2	15/01/2020	10:05 - 13:05	3	1/8	3	3	4	SW	0
Vantage Point	VP2	12/02/2020	13:50 - 16:50	3	1/8	4	3	2	W	0
Vantage Point	VP2	15/02/2020	09:50 - 12:50	3	4/8	4	3	2	S	0
Winter Walkover		27/11/2019	10:25 - 13:05		6/8	8	2	2	SE	0
Winter Walkover		30/12/2019	13:45 - 16:50		7/8	8	2	2	SSW	ILR
Winter Walkover		31/01/2020	10:15 - 13:30		5/8	6	3	2	SW	0



Survey	Location	Date	Time	Duration (hrs)	Cloud cover	Temp	Visibility (km)	Wind speed	Wind Direction	Rain
Winter Walkover		06/03/2020	12:55 - 16:10		8/8	12	3	2	SW	0
Vantage Point	VP1	29/04/2020	07.45-10.45	3	7/8	8	3	2	E	0
Vantage Point	VP1	30/04/2020	07.50-10.50	3	2/8	9	3	1	E	0
Vantage Point	VP1	28/05/2020	14:50 - 17:50	3	1/8	16	3	2	SE	0
Vantage Point	VP1	11/06/2020	17:40 - 20:40	3	4/8	13	3	2	NE	0
Vantage Point	VP1	15/06/2020	12:50 - 15:50	3	2/8	18	3	2	NW	0
Vantage Point	VP1	16/06/2020	16:45 - 19:45	3	8/8	14	3	2	NE	0
Vantage Point	VP1	18/06/2020	11:10 - 14:10	3	8/8	16	3	1	N	0
Vantage Point	VP1	21/06/2020	12:00 - 15:00	3	8/8	12	3	3	SW	showers
Vantage Point	VP1	02/07/2020	13:10 - 16:10	3	7/8	13	3	2	NW	0
Vantage Point	VP1	26/07/2020	09:40 - 12:40	3	6/8	13	3	3	W	0
Vantage Point	VP1	30/07/2020	09:40 - 12:40	3	8/8	16	2	2	SW	0
Vantage Point	VP1	26/08/2020	09:50 - 12:50	3	7/8	13	3	1	SW	0
Vantage Point	VP2	26/03/2020	13.00-16.00	3	7/8	9	3	2	W	0
Vantage Point	VP2	29/04/2020	11.15-14.15	3	8/8	10	3	2	E	0
Vantage Point	VP2	28/05/2020	11:30 - 14:30	3	1/8	21	3	2	E	0
Vantage Point	VP2	07/06/2020	14:15 -17:15	3	7/8	15	3	2	E	0
Vantage Point	VP2	08/06/2020	15:20 - 1820	3	1/8	13	3	2	W	0
Vantage Point	VP2	22/06/2020	10:25 - 13:25	3	8/8	13	3	3	S	0
Vantage Point	VP2	24/06/2020	16:30 - 19:30	3	1/8	20	3	2	NE	0
Vantage Point	VP2	25/06/2020	1205 -15:05	3	3/8	19	3	1	NE	0
Vantage Point	VP2	10/07/2020	11:20 - 14:20	3	7/8	12	3	3	NW	0
Vantage Point	VP2	12/07/2020	10:00 - 13:00	3	7/8	14	3	2	SW	0
Vantage Point	VP2	29/07/2020	08:00 - 11:00	3	8/8	11	3	2	W	0
Vantage Point	VP2	24/08/2020	08:20 - 11:20	3	1/8	9	3	1	SE	0
Breeding Walkover		28/05/2020	18:40 - 21:25		1/8	27	3	2	SE	0
Breeding Walkover		07/06/2020	08:10 - 11:20		7/8	13	3	2	E	0
Breeding Walkover		29/07/2020	12:40 - 15:30		8/8	11	3	2	SW	0



Survey	Location	Date	Time	Duration (hrs)	Cloud cover	Temp	Visibility (km)	Wind speed	Wind Direction	Rain
Hen Harrier Roost	1	04/12/2020	15:10- 16:40		2/8	5	3	3	W	0
Hen Harrier Roost	1	09/12/2020	14:50 - 16:20		2/8	7	3	2	5	0
Hen Harrier Roost	1	05/01/2020	15:15 - 16:45		0/8	8	3	2	NW	0
Hen Harrier Roost	1	29/01/2020	16:00 - 17:30		2/8	10	3	3	SW	0
Hen Harrier Roost	1	13/02/2020	16:25 - 17:55		6/8	9	3	3	NE	0
Hen Harrier Roost	1	22/02/2020	16:15 - 17:45		3/8	5	3	3	SE	0
Breeding Raptor VPs	VP1	12/05/2020	12.00-15.00		3/8	13	3	1	E	0
Breeding Raptor VPs	VP1	13/05/2020	11.35-15.35		4/8	14	3	2	SE	0
Breeding Raptor VPs	VP1	14/06/2020	09:20 - 12:20		6/8	13	3	2	SSW	0
Breeding Raptor VPs	VP1	14/06/2020	12:20 - 15:20		8/8	16	3	1	SW	0
Breeding Raptor VPs	VP1	20/07/2020	09:50 - 12:50		3/8	11	3	3	NW	0
Breeding Raptor VPs	VP2	12/05/2020	08.20-11.20		2/8	10	3	1	E	0
Breeding Raptor VPs	VP2	16/06/2020	09:40 - 12:40		6/8	12	3	3	SSW	0
Breeding Raptor VPs	VP2	25/06/2020	09.00-12.00		5/8	15	3	2	SW	0
Breeding Raptor VPs	VP2	21/07/2020	09:05 - 12:05		7/8	15	3	2	W	Showers
Breeding Raptor VPs	VP2	29/07/2020	13:05 - 16:05		7/8	14	3	2	W	0
Breeding Raptor VPs	VP2	29/07/2020	16:05 - 19:05		7/8	14	3	2	W	0
Breeding Raptor VPs	VP3	11/05/2020	10.30-13.30		3/8	12	3	2	SE	0
Breeding Raptor VPs	VP3	25/06/2020	09:10 - 12:10		7/8	16	3	3	W	0
Breeding Raptor VPs	VP3	25/06/2020	12:10 - 15:10		8/8	14	3	2	SW	0
Breeding Raptor VPs	VP3	21/07/2020	09:05 - 12:05		4/8	15	3	2	WS	0
Breeding Raptor VPs	VP3	21/07/2020	12:05 - 13:05		4/8	15	3	2	SW	0
Breeding Raptor VPs	VP4	13/05/2020	08.00-11.00		2/8	11	3	2	SE	0
Breeding Raptor VPs	VP4	30/06/2020	14:05 - 17:05		7/8	14	3	1	SSW	0
Breeding Raptor VPs	VP4	30/06/2020	17:30 - 20:30		8/8	12	2	1	NW	Showers
Breeding Raptor VPs	VP4	15/07/2020	09:50 - 12:50		8/8	12	2	2	W	0
Breeding Raptor VPs	VP4	18/07/2020	07:55 - 10:55		7/8	16	3	2	SW	0

Table 2 Vantage Point Survey Data

Species	Survey	Date	No. of birds	Start time	Duration of flight (secs)	1 (<20m)	2 (20-100m)	3 (100-130m)	4 (>130m)	Activity
Merlin	VP1	23/11/2019	1	12:48	28	0	30	0	0	Adult male flying at circa 30 metres in w direction
Sparrowhawk	VP1	23/11/2019	1	11:45	134	0	135	0	0	Juv female circling high over forestry
Hen Harrier	VP1	23/11/2019	1	11:41	31	45	0	0	0	Female foraging before being caught in updraught of turbine and thrown off course. Returned hunting moor between turbines and forestry in N direction
Sparrowhawk	VP2	25/11/2019	1	10:39	12	15	0	0	0	Adult female flying low and fast in W direction down Owenkillew River
Golden Plover	VP2	26/11/2019	40	14:05	65	0	0	75	0	
Hen Harrier	VP2	11/12/2019	1	11:27	370	375	0	0	0	Adult female observed foraging at circa 3-5 metres
Hen Harrier	VP2	11/12/2019	2	11:59	443	450	0	0	0	Adult male flying along river before foraging outside site adjacent to green road. Adult female observed hunting at close proximity to males. Both birds <10 metres at all times
Buzzard	VP2	11/12/2019	1	10:15	24	0	0	30	0	Adult female mobbed by 2 RN's
Hen Harrier	VP2	14/12/2019	2	12:21	51	60	0	0	0	Adult male and female observed interacting
Hen Harrier	VP2	14/12/2019	1	13:25	2340	2340	0	0	0	Adult male perched on ground during wintery shower
Hen Harrier	VP2	14/12/2019	1	14:02	120	120	0	0	0	Adult male foraging
Hen Harrier	VP2	14/12/2019	1	14:28	60	60	0	0	0	Adult male foraging
Hen Harrier	VP2	14/12/2019	1	14:48	160	120	45	0	0	Circling
Buzzard	VP2	14/12/2019	1	09:45	65	75	0	0	0	Adult female hunting
Hen Harrier	VP2	28/12/2019	1	10:02	180	105	75	0	0	Adult male foraging

Species	Survey	Date	No. of birds	Start time	Duration of flight (secs)	1 (<20m)	2 (20-100m)	3 (100-130m)	4 (>130m)	Activity
Kestrel	VP2	28/12/2019	1	10:02	180	105	75	0	0	
Buzzard	VP2	09/01/2020	1	10:25	90	60	30	0	0	circling, mobbed by 2 HC
Buzzard	VP2	09/01/2020	1	11:40	120	0	0	120	0	Soaring
Buzzard	VP2	09/01/2020	1	11:54	210	0	0	210	0	Soaring
Buzzard	VP1	21/01/2020	1	12:18	150	45	15	90	0	Female perched in forestry. Flew and circled over forestry before perching again
Sparrowhawk	VP1	21/01/2020	1	13:24	35	45	0	0	0	
Buzzard	VP2	12/02/2020	1	15:04	120	0	45	75	0	Flying over forestry
Buzzard	VP2	12/02/2020	1	16:52	75	30	60	0	0	Female flying over bog
Hen Harrier	VP1	04/03/2020	1	14:05	45	0	15	30	0	
Kestrel	VP2	29/04/2020	1	10:35	465	30	45	390	0	male foraging very close to turbines
Kestrel	VP2	29/04/2020	1	11:15	20	30	0	0	0	travelling carrying food
Buzzard	VP1	28/05/2020	1	13:10	60	15	15	30	0	Hunting
Buzzard	VP1	28/05/2020	1	13:35	900	15	570	315	0	Hunting before perching on ESB pole
Buzzard	VP1	28/05/2020	1	13:40	180	30	60	90	0	Flew off ESB post and hunted
Buzzard	VP1	28/05/2020	1	14:10	120	0	75	45	0	Hunting over bog
Buzzard	VP1	28/05/2020	1	17:29	300	0	180	135	0	Hunting
Kestrel	VP2	08/06/2020	1	16:15	480	45	165	135	150	Hunting - diving at ground intermittently but unsuccessful. Flew very high
Buzzard	VP2	08/06/2020	1	17:16	90	30	60	0	0	Flying towards river
Kestrel	VP1	11/06/2020	1	17:45	210	15	150	45	0	Hunting before flying across road and uphill in NE direction
Buzzard	VP1	11/06/2020	2	18:10	480	0	45	165	270	Soaring
Buzzard	VP1	11/06/2020	2	18:55	420	0	75	345	0	Hunting
Buzzard	VP1	11/06/2020	1	19:15	180	30	105	45	0	Hunting

Species	Survey	Date	No. of birds	Start time	Duration of flight (secs)	1 (<20m)	2 (20-100m)	3 (100-130m)	4 (>130m)	Activity
Buzzard	VP1	11/06/2020	1	20:05	120	0	0	120	0	Hunting
Buzzard	VP1	15/06/2020	1	14:55	210	30	45	135	0	Hunting in ENE direction
Buzzard	VP1	15/06/2020	1	15:10	420	0	60	360	0	Hunting
Buzzard	VP1	15/06/2020	1	15:30	240	0	45	195	0	Hunting
Buzzard	VP1	16/06/2020	1	16:55	360	45	195	120	0	Hunting, went down bog mobbed by 2 HC
Buzzard	VP1	16/06/2020	1	17:30	180	0	60	120	0	Hunting then landed on tree by forestry
Kestrel	VP1	18/06/2020	1	12:25	180	45	135	0	0	Carrying large prey item. Flew to edge of forestry and landed on fence post
Buzzard	VP2	18/06/2020	1	12:10	60	0	0	0	60	Soaring high before losing in clouds
Buzzard	VP1	18/06/2020	1	12:35	360	30	135	195	0	Foraging
Buzzard	VP1	18/06/2020	1	12:42	180	0	45	135	0	Hunting
Buzzard	VP1	18/06/2020	1	12:58	420	15	30	375	0	Hunting and went to ground
Buzzard	VP1	18/06/2020	1	13:40	180	0	0	180	0	Foraging
Kestrel	VP1	21/06/2020	1	13:59	360	30	345	0	0	
Buzzard	VP1	21/06/2020	1	13:26	180	15	150	0	0	Hunting over re-stock forestry
Common Snipe	VP2	22/06/2020	1	12:47	1	0	0	0	0	Heard drumming over bog
Buzzard	VP2	24/06/2020	1	17:58	129	0	30	75	0	Soaring before flying towards trees and out of sight
Buzzard	VP2	25/06/2020	1	13:30	305	0	255	60	0	Soaring over bog then flew in a shallow dive to forestry
Kestrel	VP1	02/07/2020	1	14:14	150	15	60	75	0	Hunting close to forestry edge. Dived at prey then lost sight
Buzzard	VP1	02/07/2020	2	13:50	240	0	45	195	0	Soaring over hill
Sparrowhawk	VP1	02/07/2020	3	14:45	240	0	0	150	90	Soaring over hill



Species	Survey	Date	No. of birds	Start time	Duration of flight (secs)	1 (<20m)	2 (20-100m)	3 (100-130m)	4 (>130m)	Activity
Kestrel	VP2	10/07/2020	1	14:15	120	30	90	0	0	Mobbed by meadow pipits
Buzzard	VP2	12/07/2020	3	10:55	300	0	165	150	0	Adult and 2 juvs soaring. Juveniles calling
Buzzard	VP1	26/07/2020	1	09:53	60	45	15	0	0	Flew along forest
Buzzard	VP1	26/07/2020	1	10:40	240	0	195	45	0	Hunting over bog then over edge of forest. Landed briefly on an ESB pole
Buzzard	VP1	26/07/2020	1	11:25	60	0	60	0	0	Flying over forestry
Buzzard	VP1	26/07/2020	2	11:55	300	0	0	180	135	Soaring over forest. Went very high. One was juvenile
Sparrowhawk	VP1	26/07/2020	1	10:35	30	30	0	0	0	Flew low and fast over field
Kestrel	VP2	24/08/2020	1	09:40	300	90	225	0	0	Hunting over bog. Went to ground after prey at one stage
Kestrel	VP2	24/08/2020	1	10:37	120	0	0	120	0	Hunting
Kestrel	VP2	24/08/2020	1	10:50	600	0	270	330	0	Hunting over bog
Kestrel	VP2	24/08/2020	1	10:55	180	0	45	135	0	Hunting close to other K
Kestrel	VP1	26/08/2020	2	10:51	30	0	30	0	0	Fleeting glimpse of 2 K. Flew close together over hill

Table 3 Breeding Raptor Survey Data

Species	Survey	Date	No. of birds	Start time	Duration of flight (secs)	1 (<20m)	2 (20-100m)	3 (100-130m)	4 (>130m)	Activity
Buzzard	Breeding Raptor Survey	12/05/2020	1	12:20	40	30				foraging beside t1 in Crockahenny
Hen Harrier	Breeding Raptor Survey	14/06/2020	1	13:36	144	120				
Sparrowhawk	Breeding Raptor Survey	16/06/2020	1	10:41	53	60				Adult male carrying food
Hen Harrier	Breeding Raptor Survey	21/06/2020	1	09:41	540	210				Adult male foraging. Flying low, moved across Crocknacradhy in NE direction
Hen Harrier	Breeding Raptor Survey	28/06/2020	1	13:46	163	165				Foraging
Golden Eagle	Breeding Raptor Survey	20/07/2020	1	11:25	480	90				Juvenile. Flew over Crockaheeny almost under turbine 1. Flew low along valley hunting mobbed by HC & BZ
Buzzard	Breeding Raptor Survey	20/07/2020	1	09:55	180	0				Soaring over forest
Buzzard	Breeding Raptor Survey	20/07/2020	1	11:42	180	0				Soaring over Glenard forestry
Kestrel	Breeding Raptor Survey	20/07/2020	1	10:42	240	120				Hunting over hill, mobbed by HC's



Species	Survey	Date	No. of birds	Start time	Duration of flight (secs)	1 (<20m)	2 (20-100m)	3 (100-130m)	4 (>130m)	Activity
Sparrowhawk	Breeding Raptor Survey	20/07/2020	1	11:25	30	30				
Golden Eagle	Breeding Raptor Survey	21/07/2020	1	12:57	69	15				Juv male flying low in W direction landed on sheep carcass. Observed feeding on carcass for 1hr 5min before flying off low in N direction

Table 4 Winter Walkover Survey Data

Species	Survey	Date	No. of birds	Start time	Duration of flight (secs)	1 (<20m)	2 (20-100m)	3 (100-130m)	4 (>130m)	Activity
Common Snipe	Winter Walkover	27/11/2019	1	11:01	1	0				Flushed on WO
Common Snipe	Winter Walkover	27/11/2019	1	12:40	1	0				Flushed on WO
Hen Harrier	Winter Walkover	27/11/2019	2	16:05	1500	1140				2 adults males observed circling at dusk over area of deep heather before dropping to roost at 16:30
Common Snipe	Winter Walkover	30/12/2019	1	15:06	1	0				Flushed on WO
Hen Harrier	Winter Walkover	31/01/2020	1	12:01	39	45				Adult male foraging

Table 5 Hen Harrier Roost Survey Data

Species	Survey	Date	No. of birds	Start time	Duration of flight (secs)	1 (<20m)	2 (20-100m)	3 (100-130m)	4 (>130m)	Activity
Hen Harrier	Hen Harrier Roost	04/12/2019	1	16:00	180	90				Adult male flew in, circled roost before dropping into heather
Hen Harrier	Hen Harrier Roost	04/12/2019	1	16:20	120	90				Sub adult male, circled roost before dropping in circa 10 metres from adult male
Hen Harrier	Hen Harrier Roost	09/12/2019	1	15:20	120	90				Adult male - Landed on fence post, sat for circa 30 mins before flying and landing on ground with second male, then flew, circled roost and dropped in
Hen Harrier	Hen Harrier Roost	09/12/2019	1	16:00	240	180				Adult male - Flew around with first male and landed on turf bank beside first male, the flew to roost
Hen Harrier	Hen Harrier Roost	09/12/2019	1	16:15	150	135				Sub adult male - Flew low around the area going close to other 2 males at one stage then flew to roost
Hen Harrier	Hen Harrier Roost	05/01/2020	1	16:20	180	150				Adult male - Flew in and landed on fence post, flew again, and went down to roost
Hen Harrier	Hen Harrier Roost	05/01/2020	1	16:25	240	135				Adult male- Landed on fence post. Flushed the female before going to roost
Hen Harrier	Hen Harrier Roost	05/01/2020	1	16:25	90	75				Sub adult male - Brief circle of roost site then dropped in beside the others
Hen Harrier	Hen Harrier Roost	05/01/2020	1	16:27	195	135				Adult female - Flushed from her roost by one of the adult males before going down again