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APPENDIX 7.3 (SUMMARY TABLES)

Table 1 Vantage Point Survey Effort Summary Table

Survey Season	Months	Minimum Effort per VP
2017/2018 Non-Breeding Season (10VPs)	Oct - Mar	36 hours/VP
2018 Breeding Season (10 VPs)	Apr - Sep	36 hours/VP
2018/2019 Non-Breeding Season (10 VPs)	Oct - Mar	36 hours/VP
2019 Breeding Season (10VPs)	Apr - Sep	36 hours/VP

Table 2 Monthly distribution of flight activity for the target species recorded during vantage point surveys

Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals	
Whooper Swan	2017	records										2	5	17	24	
		bird-secs										85	495	2,320	2,900	
	2018	records	4	5									3	19	7	38
		bird-secs	360	220									80	2,484	431	3,575
	2019	records														0
		bird-secs														0
Golden Plover	2017	records										7	3		10	
		bird-secs										12,660	210		12,870	
	2018	records		1	1	2							8	4	1	17
		bird-secs		120	200	208							3,528	685	70	4,811
	2019	records			4	2										6
		bird-secs			834	65										899
Hen Harrier	2017	records										3			3	
		bird-secs										110			110	
	2018	records		2			2		1	1			2	4	2	14
		bird-secs		90			65		180	237			200	366	527	1,665
	2019	records			1						3					4
		bird-secs			124						382					506



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals	
Common Crane	2017	records											0			
		bird-secs											0			
	2018	records													1	1
		bird-secs													86	86
	2019	records		2	2										4	
		bird-secs		232	304										536	
Kingfisher	2017	records											0			
		bird-secs											0			
	2018	records										1			1	
		bird-secs										20			20	
	2019	records										1			1	
		bird-secs										20			20	
Little Egret	2017	records											1	1		
		bird-secs											20	20		
	2018	records	1							4	1		2	5	2	15
		bird-secs	120							314	76		173	160	75	918
	2019	records	1							3	3					7
		bird-secs	94							265	148					507
Marsh Harrier	2017	records											0			
		bird-secs											0			
	2018	records													0	
		bird-secs													0	
	2019	records				2									2	
		bird-secs				1,080									1,080	
Merlin	2017	records											1	1		
		bird-secs											30	30		
	2018	records		2	1										3	
		bird-secs		200	20										220	



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
	2019	records													0
		bird-secs													
Peregrine	2017	records										1	1	1	3
		bird-secs										45	180	30	255
	2018	records	1	2		1		1	2			1	3	1	12
		bird-secs	90	150		52		38	642			40	296	100	1,408
	2019	records		1	1	1					2				5
		bird-secs		156	80	40					690				966
Lapwing	2017	records										3	4	5	12
		bird-secs										370	570	780	1,720
	2018	records	6	2	10	5	21	3	11	1	1	16	22	5	103
		bird-secs	675	380	2,140	355	1,558	126	1,136	62	114	1,992	2,058	627	11,223
	2019	records		2	1	13	46	11	6	4					83
		bird-secs		566	59	749	3,511	582	382	162					6,011
Black-headed Gull	2017	records													0
		bird-secs													
	2018	records				48	61	17	6	1			1		134
		bird-secs				3,608	4,957	1,719	437	25			180		10,926
	2019	records		1	9	18	29	16	8	1					82
		bird-secs		147	1,144	1,741	3,324	1,318	830	135					8,639
Herring Gull	2017	records													0
		bird-secs													
	2018	records							7	2			1		10
		bird-secs							1,134	421			40		1,595
	2019	records													0
		bird-secs													0
Woodcock	2017	records												1	1
		bird-secs												5	5



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
	2018	records					15							1	16
		bird-secs					756							5	761
	2019	records		1		11	1								13
		bird-secs		20		1,630	15								1,665
Curlew	2017	records													0
		bird-secs													0
	2018	records													0
		bird-secs													0
	2019	records								1	2				3
		bird-secs								143	288				431
Dunlin	2017	records													0
		bird-secs													0
	2018	records					1								1
		bird-secs					80								80
	2019	records													0
		bird-secs													0
Shoveler	2017	records													0
		bird-secs													0
	2018	records													0
		bird-secs													0
	2019	records				2									2
		bird-secs				60									60
Tufted Duck	2017	records													0
		bird-secs													0
	2018	records				1									1
		bird-secs				22									22
	2019	records				1									1
		bird-secs				15									15



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals		
Long-eared Owl	2017	records											0				
		bird-secs											0				
	2018	records											0				
		bird-secs											0				
	2019	records											1				
		bird-secs											5				
Buzzard	2017	records											5	2	6	13	
		bird-secs											630	130	1,020	1,780	
	2018	records	6	6	7	17	56	47	22	28	16	34	8	2	249		
		bird-secs	300	470	1,370	2,577	10,713	7,568	4,081	4,375	2,063	7,963	1,031	87	42,598		
	2019	records	6	28	12	24	18	26	31	16	10				171		
		bird-secs	620	1,997	1,902	4,136	2,635	5,570	4,680	1,725	3,211				26,476		
	Sparrowhawk	2017	records											3	1	1	5
			bird-secs											70	30	20	120
2018		records	5	4	3	3	3	3	3	2	3	5	3		37		
		bird-secs	160	330	440	355	380	300	365	57	376	405	44		3,212		
2019		records	1		1		4		2	6	1				15		
		bird-secs	16		275		106		140	407	200				1,144		
Kestrel	2017	records											10	4	6	20	
		bird-secs											700	390	625	1,715	
	2018	records	4	2	4	2	14	17	18	23	13	28	12	18	155		
		bird-secs	400	810	420	279	1,891	1,479	2,281	3,379	1,583	5,306	3,089	3,459	24,376		
	2019	records	8	6	1	15	7	22	52	35	18				164		
		bird-secs	1,277	576	47	1,895	571	1,612	5,663	6,246	2,943				20,830		
Snipe	2017	records														0	
		bird-secs														0	
	2018	records	1				6	5		1	2	7			22		
		bird-secs	15				493	227		24	95	325			1,179		



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
	2019	records		1		4	1		1						7
		bird-secs		24		371	50		30						
Ringed Plover	2017	records													0
		bird-secs													0
	2018	records													0
		bird-secs													0
	2019	records					7								7
		bird-secs					11								11
Teal	2017	records													0
		bird-secs													0
	2018	records												1	1
		bird-secs												4	4
	2019	records					1		1						2
		bird-secs					3		1						4
Black-tailed Godwit	2017	records													0
		bird-secs													0
	2018	records													0
		bird-secs													0
	2019	records									1				1
		bird-secs									5				5

Based on analysis of all flight activity data within focus area, including data from VPs 1-10 and observations of flights below PCH. Survey period = October 2017 - September 2019 (Shaded Cells were months not surveyed). Records = No. of Observations. Bird-secs = Total Duration of Flight(s).



Table 3 All observations within potential risk area for target species during vantage point watches

Species	Values	VP2	VP3	VP4	VP5	VP6	VP7	VP8	VP10	Totals
Whooper Swan	Observations (All Bands)	1		3	2	7	4	2	7	26
	Duration in PCH (Band 3 and/or 4, in Seconds)	630		1,080	0	2,520	0	0	3,960	8,190
Golden Plover	Observations (All Bands)	3	6		4	2	7		4	26
	Duration in PCH (Band 3 and/or 4, in Seconds)	88,660	62,580		25,140	30,840	58,505		10,000	275,725
Hen Harrier	Observations (All Bands)	2	1	1	1	3		5	3	16
	Duration in PCH (Band 3 and/or 4, in Seconds)	0	0	0	40	0		0	140	180
Common Crane	Observations (All Bands)	3	1		1					5
	Duration in PCH (Band 3 and/or 4, in Seconds)	180	0		344					524
Little Egret	Observations (All Bands)			1		1		1		3
	Duration in PCH (Band 3 and/or 4, in Seconds)			150		120		0		270
Marsh Harrier	Observations (All Bands)							2		2
	Duration in PCH (Band 3 and/or 4, in Seconds)							820		820
Merlin	Observations (All Bands)	1		1			1	1		4
	Duration in PCH (Band 3 and/or 4, in Seconds)	0		0			0	0		0
Peregrine	Observations (All Bands)	5	3	2	2	2	1		4	19
	Duration in PCH (Band 3 and/or 4, in Seconds)	671	752	215	200	60	0		120	2,018
Lapwing (Breeding)	Observations (All Bands)	2	8	52		1	10	14	8	95
	Duration in PCH (Band 3 and/or 4, in Seconds)	0	120	1,496		880	0	0	412	2,908
Lapwing (Winter)	Observations (All Bands)	2		1	17	11	2		6	39
	Duration in PCH (Band 3 and/or 4, in Seconds)	4,488		39	3,930	25,380	0		32,920	66,757
Black-headed Gull	Observations (All Bands)	2		30		5	28	3	24	92
	Duration in PCH (Band 3 and/or 4, in Seconds)	35		6843		1533	3788	635	20,112	32,946
Herring Gull	Observations (All Bands)				1		3			4
	Duration in PCH (Band 3 and/or 4, in Seconds)				0		1,276			1,276



Species	Values	VP2	VP3	VP4	VP5	VP6	VP7	VP8	VP10	Totals
Woodcock	Observations (All Bands)	2	8	4				9	4	27
	Duration in PCH (Band 3 and/or 4, in Seconds)	0	0	0				0	0	0
Curlew	Observations (All Bands)							2		2
	Duration in PCH (Band 3 and/or 4, in Seconds)							2,483		2,483
Shoveler	Observations (All Bands)							2		2
	Duration in PCH (Band 3 and/or 4, in Seconds)							0		0
Tufted Duck	Observations (All Bands)				1			1		2
	Duration in PCH (Band 3 and/or 4, in Seconds)				0			0		0
Buzzard	Observations (All Bands)	72	55	34	31	65	42	27	35	361
	Duration in PCH (Band 3 and/or 4, in Seconds)	13,187	11,548	2,369	6,457	8,281	10,214	5,790	10,694	68,540
Sparrowhawk	Observations (All Bands)	9	6	5	3	10	6	3	5	47
	Duration in PCH (Band 3 and/or 4, in Seconds)	813	980	410	175	382	184	240	272	3,456
Kestrel	Observations (All Bands)	18	30	44	30	38	55	33	40	288
	Duration in PCH (Band 3 and/or 4, in Seconds)	487	480	1,291	688	1,639	2,579	2,260	3,845	13,269
Snipe	Observations (All Bands)		1	5			2		1	9
	Duration in PCH (Band 3 and/or 4, in Seconds)		0	604			400		0	1,004
Ringed Plover	Observations (All Bands)		2	5						7
	Duration in PCH (Band 3 and/or 4, in Seconds)		0	0						0
Teal	Observations (All Bands)					1		1		2
	Duration in PCH (Band 3 and/or 4, in Seconds)					0		0		0
Black-tailed Godwit	Observations (All Bands)					1				1
	Duration in PCH (Band 3 and/or 4, in Seconds)					0				0

Based on analysis of all flight data at PCH for each target species recorded between October 2017 and September 2019. Any non-flight observations were excluded from data analysis. Data from VP1 and VP9 was excluded from data analysis as these VPs did not contribute any viewshed coverage of the proposed turbines or 500m of same. PCH = (no. of birds x total duration in PCH). PCH (Potential Collision Height) is considered as all flights which occurred above 25m as a worst-case scenario for swept height of the turbine blades. Flights associated with the Drinagh or Clooneen Wetlands, more than 500m from the proposed turbines were not included in Collision Risk Modelling and time from these is not included in PCH figures above.

Table 4 Summary of Non-Target Species observations during Vantage Point Surveys

Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Whimbrel	2017	Present = X												
	2018	Present = X												
	2019	Present = X				X	X							
Grey Plover	2017	Present = X												
	2018	Present = X				X								
	2019	Present = X												
Mute Swan	2017	Present = X										X	X	X
	2018	Present = X	X	X	X	X	X				X	X	X	X
	2019	Present = X				X	X							
Greylag Goose	2017	Present = X										X		X
	2018	Present = X			X	X						X	X	
	2019	Present = X	X				X							
Great Black-backed Gull	2017	Present = X												
	2018	Present = X										X		
	2019	Present = X												
Lesser Black-backed Gull	2017	Present = X												
	2018	Present = X				X	X			X	X	X		
	2019	Present = X				X			X					
Cormorant	2017	Present = X												
	2018	Present = X				X	X	X		X	X	X	X	X
	2019	Present = X		X	X	X					X			
Grey Heron	2017	Present = X												
	2018	Present = X		X		X	X	X	X	X	X	X	X	X
	2019	Present = X	X	X	X	X	X	X	X	X	X			
Little Grebe	2017	Present = X										X	X	
	2018	Present = X		X	X									
	2019	Present = X									X			



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mallard	2017	Present = X												X
	2018	Present = X		X		X	X	X	X	X	X	X	X	X
	2019	Present = X	X	X	X	X	X		X	X	X			
Water Rail	2017	Present = X											X	X
	2018	Present = X		X										
	2019	Present = X												
Moorhen	2017	Present = X												
	2018	Present = X					X							
	2019	Present = X												
Yellowhammer	2017	Present = X												
	2018	Present = X		X			X					X		
	2019	Present = X				X	X	X	X					
Grey Wagtail	2017	Present = X												
	2018	Present = X												
	2019	Present = X							X					
Meadow Pipit	2017	Present = X												
	2018	Present = X												X
	2019	Present = X				X	X	X	X		X			
Grasshopper Warbler	2017	Present = X												
	2018	Present = X												
	2019	Present = X					X	X	X					
Cuckoo	2017	Present = X												
	2018	Present = X				X	X							
	2019	Present = X				X	X				X			
Swift	2017	Present = X												
	2018	Present = X												
	2019	Present = X					X		X					



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sand Martin	2017	Present = X												
	2018	Present = X			X		X							
	2019	Present = X				X								
House Martin	2017	Present = X												
	2018	Present = X												
	2019	Present = X					X							
Barn Swallow	2017	Present = X												
	2018	Present = X					X	X	X					
	2019	Present = X				X	X	X	X	X	X			
Fieldfare	2017	Present = X												
	2018	Present = X												
	2019	Present = X		X										
Mistle Thrush	2017	Present = X												
	2018	Present = X				X	X							
	2019	Present = X		X				X	X	X	X			
Song Thrush	2017	Present = X												
	2018	Present = X												
	2019	Present = X	X		X	X	X	X			X			
Blackbird	2017	Present = X												
	2018	Present = X				X	X					X	X	X
	2019	Present = X	X		X	X	X	X	X	X	X			
Raven	2017	Present = X											X	
	2018	Present = X				X	X			X	X	X	X	X
	2019	Present = X	X	X	X	X	X	X	X	X	X			
Rook	2017	Present = X												
	2018	Present = X				X	X		X	X	X	X	X	X
	2019	Present = X	X	X	X		X	X		X	X			



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hooded Crow	2017	Present = X												
	2018	Present = X				X	X		X	X	X	X	X	X
	2019	Present = X	X	X	X		X	X		X	X			
Jackdaw	2017	Present = X												
	2018	Present = X				X	X					X	X	X
	2019	Present = X		X			X	X						
Jay	2017	Present = X												
	2018	Present = X				X				X	X	X		
	2019	Present = X					X	X	X		X			
Magpie	2017	Present = X												
	2018	Present = X				X	X			X	X	X		
	2019	Present = X	X	X	X			X			X			
Pheasant	2017	Present = X												
	2018	Present = X				X	X					X		
	2019	Present = X	X				X							
Wood Pigeon	2017	Present = X												
	2018	Present = X				X	X		X	X	X	X	X	X
	2019	Present = X	X	X	X	X	X	X		X	X			
Collared Dove	2017	Present = X												
	2018	Present = X				X	X			X			X	
	2019	Present = X					X		X					
Sedge Warbler	2017	Present = X												
	2018	Present = X												
	2019	Present = X					X	X	X					
Willow Warbler	2017	Present = X												
	2018	Present = X				X	X							
	2019	Present = X				X	X	X	X	X				



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Reed Bunting	2017	Present = X												
	2018	Present = X				X								
	2019	Present = X	X			X	X	X	X	X				
Willow Tit	2017	Present = X												
	2018	Present = X												
	2019	Present = X					X							
Long-tailed Tit	2017	Present = X												
	2018	Present = X					X					X		X
	2019	Present = X				X	X	X	X	X	X			
Coal Tit	2017	Present = X												
	2018	Present = X				X	X							
	2019	Present = X				X	X	X	X					
Great Tit	2017	Present = X												
	2018	Present = X				X								
	2019	Present = X			X	X	X	X	X		X			
Blue Tit	2017	Present = X												
	2018	Present = X										X		
	2019	Present = X	X		X	X	X	X	X					
Blackcap	2017	Present = X												
	2018	Present = X					X							
	2019	Present = X				X	X	X	X					
House Sparrow	2017	Present = X												
	2018	Present = X											X	
	2019	Present = X				X	X							
Dunnock	2017	Present = X												
	2018	Present = X				X	X							
	2019	Present = X	X			X	X	X	X					



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Skylark	2017	Present = X												
	2018	Present = X										X		
	2019	Present = X				X	X	X	X					
Linnet	2017	Present = X												
	2018	Present = X				X	X							
	2019	Present = X			X	X	X	X						
Whitethroat	2017	Present = X												
	2018	Present = X					X							
	2019	Present = X				X	X	X	X					
Wheatear	2017	Present = X												
	2018	Present = X												
	2019	Present = X					X							
Stonechat	2017	Present = X												
	2018	Present = X				X								
	2019	Present = X		X			X	X	X		X			
Starling	2017	Present = X											X	X
	2018	Present = X	X									X	X	X
	2019	Present = X	X	X			X	X			X			
Siskin	2017	Present = X												
	2018	Present = X					X							
	2019	Present = X					X	X	X					
Lesser Redpoll	2017	Present = X												
	2018	Present = X					X							
	2019	Present = X				X	X	X	X					
Goldcrest	2017	Present = X												
	2018	Present = X												
	2019	Present = X					X		X		X			



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pied Wagtail	2017	Present = X												
	2018	Present = X					X						X	
	2019	Present = X					X	X	X		X			
Chiffchaff	2017	Present = X												
	2018	Present = X				X								
	2019	Present = X				X	X	X	X					
Greenfinch	2017	Present = X												
	2018	Present = X												
	2019	Present = X					X	X						
Goldfinch	2017	Present = X												
	2018	Present = X									X			
	2019	Present = X				X	X	X	X					
Bullfinch	2017	Present = X												
	2018	Present = X												
	2019	Present = X				X	X	X	X					
Chaffinch	2017	Present = X												
	2018	Present = X				X	X					X		
	2019	Present = X	X		X	X	X	X	X		X			
Robin	2017	Present = X												
	2018	Present = X				X						X	X	
	2019	Present = X	X		X	X	X	X	X		X			
Wren	2017	Present = X												
	2018	Present = X				X	X					X		X
	2019	Present = X		X	X	X	X	X	X	X	X			

Based on analysis of all flight activity data within focus area, including data from VPs 1-10. Survey period = October 2017 - September 2019 (Shaded Cells were months not surveyed).

Table 5 Target Species observations during Breeding Bird Surveys

Species	Year	Standardised	Apr	May	Jun	Jul	Totals
Golden Plover	2018	No. of observations	7				7
		No. of individuals	167				167
	2019	No. of observations	1				1
		No. of individuals	60				60
Red-necked Phalarope	2018	No. of observations					0
		No. of individuals					0
	2019	No. of observations			2		2
		No. of individuals			2		2
Hen Harrier	2018	No. of observations					0
		No. of individuals					0
	2019	No. of observations			1		1
		No. of individuals			1		1
Kingfisher	2018	No. of observations			1		1
		No. of individuals			1		1
	2019	No. of observations	1			1	2
		No. of individuals	1			1	2
Peregrine	2018	No. of observations		1			1
		No. of individuals		1			1
	2019	No. of observations					0
		No. of individuals					0
Lapwing	2018	No. of observations	11	22	19		52
		No. of individuals	19	38	33		90
	2019	No. of observations	12	11	16	7	46
		No. of individuals	32	22	43	85	182



Species	Year	Standardised	Apr	May	Jun	Jul	Totals
Black-headed Gull	2018	No. of observations	4	15	8		27
		No. of individuals	27	346	59		432
	2019	No. of observations	3	8	6	5	22
		No. of individuals	64	20	20	32	136
Herring Gull	2018	No. of observations		1			1
		No. of individuals		3			3
	2019	No. of observations					0
		No. of individuals					0
Woodcock	2018	No. of observations		1			1
		No. of individuals		1			1
	2019	No. of observations			1		1
		No. of individuals			1		1
Curlew	2018	No. of observations			2		2
		No. of individuals			2		2
	2019	No. of observations			2		2
		No. of individuals			3		3
Redshank	2018	No. of observations	2	4	3		9
		No. of individuals	4	9	4		17
	2019	No. of observations	1	2	1		4
		No. of individuals	2	3	1		6
Shoveler	2018	No. of observations					0
		No. of individuals					0
	2019	No. of observations	1				1
		No. of individuals	4				4
Tufted Duck	2018	No. of observations	4	4	2		10
		No. of individuals	9	18	3		30
	2019	No. of observations		3	6	1	10
		No. of individuals		12	14	6	32



Species	Year	Standardised	Apr	May	Jun	Jul	Totals
Buzzard	2018	No. of observations	9	5	8		22
		No. of individuals	10	5	9		24
	2019	No. of observations	4	7	3	8	22
		No. of individuals	5	7	3	8	23
Sparrowhawk	2018	No. of observations		3	2		5
		No. of individuals		3	2		5
	2019	No. of observations	3	1			4
		No. of individuals	4	1			5
Kestrel	2018	No. of observations	6	4			10
		No. of individuals	6	4			10
	2019	No. of observations	2		2	9	13
		No. of individuals	2		2	13	17
Snipe	2018	No. of observations	21	6	17		44
		No. of individuals	26	8	21		55
	2019	No. of observations	19	4	4	5	32
		No. of individuals	21	6	4	6	37
Ringed Plover	2018	No. of observations	2		6		8
		No. of individuals	4		11		15
	2019	No. of observations	1	2	5	3	11
		No. of individuals	2	3	9	5	19

2018 surveys consisted of O'Brien & Smith survey methodology for lowland breeding waders. As per the recommended survey approach surveys were undertaken between April and June in 2018. In 2019 Breeding Bird Surveys continued into July to ensure all species, including late breeders, were surveyed for as per Adapted Brown & Shepard Survey methodology.

Table 6 Non-Target species observations during Breeding Bird Surveys

Species	Year	Standardised	Apr	May	Jun	Jul
Whimbrel	2018	Present = X				
	2019	Present = X		X		
Common Sandpiper	2018	Present = X			X	
	2019	Present = X		X	X	X
Mute Swan	2018	Present = X	X	X	X	
	2019	Present = X		X	X	X
Greylag Goose	2018	Present = X	X	X		
	2019	Present = X				
Lesser Black-backed Gull	2018	Present = X		X		
	2019	Present = X			X	
Cormorant	2018	Present = X	X			
	2019	Present = X			X	
Grey Heron	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Little Grebe	2018	Present = X	X	X	X	
	2019	Present = X		X	X	
Great Crested Grebe	2018	Present = X	X	X	X	
	2019	Present = X		X		
Mallard	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	
Teal	2018	Present = X	X			
	2019	Present = X		X		
Water Rail	2018	Present = X		X		
	2019	Present = X			X	



Species	Year	Standardised	Apr	May	Jun	Jul
Moorhen	2018	Present = X	X	X	X	
	2019	Present = X		X		
Yellowhammer	2018	Present = X		X	X	
	2019	Present = X	X	X	X	X
Meadow Pipit	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Grasshopper Warbler	2018	Present = X				
	2019	Present = X		X		X
Cuckoo	2018	Present = X		X	X	
	2019	Present = X	X	X		
Swift	2018	Present = X				
	2019	Present = X		X		
Sand Martin	2018	Present = X				
	2019	Present = X	X			
Barn Swallow	2018	Present = X		X	X	
	2019	Present = X	X	X		
Mistle Thrush	2018	Present = X		X	X	
	2019	Present = X				X
Song Thrush	2018	Present = X	X			
	2019	Present = X	X	X		
Blackbird	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Raven	2018	Present = X	X	X	X	
	2019	Present = X		X	X	X



Species	Year	Standardised	Apr	May	Jun	Jul
Rook	2018	Present = X	X			
	2019	Present = X				
Hooded Crow	2018	Present = X	X	X		
	2019	Present = X				
Jay	2018	Present = X	X		X	
	2019	Present = X		X		X
Magpie	2018	Present = X	X			
	2019	Present = X				
Pheasant	2018	Present = X	X			
	2019	Present = X				
Wood Pigeon	2018	Present = X	X	X	X	
	2019	Present = X			X	
Sedge Warbler	2018	Present = X				
	2019	Present = X		X		X
Willow Warbler	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Reed Bunting	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Long-tailed Tit	2018	Present = X				
	2019	Present = X	X	X	X	X
Coal Tit	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Great Tit	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X



Species	Year	Standardised	Apr	May	Jun	Jul
Blue Tit	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Blackcap	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
House Sparrow	2018	Present = X	X			
	2019	Present = X	X	X		
Dunnock	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Skylark	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Linnet	2018	Present = X	X	X	X	
	2019	Present = X	X			
Whitethroat	2018	Present = X		X	X	
	2019	Present = X	X	X	X	X
Wheatear	2018	Present = X				
	2019	Present = X		X		
Stonechat	2018	Present = X	X	X	X	
	2019	Present = X		X	X	X
Starling	2018	Present = X	X	X	X	
	2019	Present = X				
Siskin	2018	Present = X	X	X		
	2019	Present = X				X
Lesser Redpoll	2018	Present = X			X	
	2019	Present = X	X	X	X	X



Species	Year	Standardised	Apr	May	Jun	Jul
Goldcrest	2018	Present = X			X	
	2019	Present = X		X		
Pied Wagtail	2018	Present = X	X	X	X	
	2019	Present = X				X
Chiffchaff	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Greenfinch	2018	Present = X	X	X		
	2019	Present = X				
Goldfinch	2018	Present = X	X			
	2019	Present = X	X	X	X	X
Bullfinch	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Chaffinch	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Robin	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X
Wren	2018	Present = X	X	X	X	
	2019	Present = X	X	X	X	X

2018 surveys consisted of O'Brien & Smith survey methodology for lowland breeding waders. As per the recommended survey approach surveys were undertaken between April and June in 2018. In 2019 Breeding Bird Surveys continued into July to ensure all species, including late breeders, were surveyed for as per Adapted Brown & Shepard Survey methodology.

Table 7 Breeding Raptor Survey Summary Table

Species	Year	Standardised	Apr	May	Jun	Jul	Totals
Peregrine	2018	No. of observations				2	2
		No. of individuals				2	2
	2019	No. of observations					0
		No. of individuals					0
Buzzard	2018	No. of observations	10	11	12	13	46
		No. of individuals	11	12	12	13	48
	2019	No. of observations	5	5	6	6	22
		No. of individuals	7	8	6	6	27
Sparrowhawk	2018	No. of observations	2		1	3	6
		No. of individuals	2		1	3	6
	2019	No. of observations		1	3	1	5
		No. of individuals		1	3	4	8
Kestrel	2018	No. of observations	8	3	2	2	15
		No. of individuals	9	3	2	2	16
	2019	No. of observations	2	3		3	8
		No. of individuals	2	3		3	8

Table 8 Summary of monthly abundance during Winter Transect/Waterfowl Surveys

Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Aug	Sep	Oct	Nov	Dec	Totals	
Whooper Swan	2017	No. of observations										N/A		0
		No. of individuals										3		3
	2018	No. of observations	N/A								6	12	10	28
		No. of individuals	2								26	67	35	130
	2019	No. of observations	9	9	6					1				25
		No. of individuals	39	66	44					1				150
Golden Plover	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations									5			5
		No. of individuals									64			64
	2019	No. of observations	1		1			1						3
		No. of individuals	2		1			1						4
Hen Harrier	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations										2		2
		No. of individuals										2		2
	2019	No. of observations	1	1	1									3
		No. of individuals	1	1	1									3
Kingfisher	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations									1			1
		No. of individuals									1			1
	2019	No. of observations			1									1
		No. of individuals			1									1



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Aug	Sep	Oct	Nov	Dec	Totals	
Little Egret	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations							2	3	1	4	1	11
		No. of individuals							3	5	1	5	1	15
	2019	No. of observations	6	2	3			1		1				13
		No. of individuals	6	2	4			1		2				15
Peregrine	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations												0
		No. of individuals												0
	2019	No. of observations		1										1
		No. of individuals		1										1
Lapwing	2017	No. of observations										N/A		0
		No. of individuals										45		45
	2018	No. of observations	N/A		N/A				3	2	5	10	2	22
		No. of individuals	12		3				85	49	16	1,162	91	1,418
	2019	No. of observations	2		12	4	9			1				28
		No. of individuals	85		30	16	32			17				180
Black-headed Gull	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations												0
		No. of individuals												0
	2019	No. of observations		1	4	3	6							14
		No. of individuals		2	18	244	332							596



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Aug	Sep	Oct	Nov	Dec	Totals	
Herring Gull	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations												0
		No. of individuals												0
	2019	No. of observations			1									1
		No. of individuals			2									2
Woodcock	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations	1											1
		No. of individuals	1											1
	2019	No. of observations	4	1	2									7
		No. of individuals	4	1	2									7
Curlew	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations									1			1
		No. of individuals									1			1
	2019	No. of observations												0
		No. of individuals												0
Dunlin	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations												0
		No. of individuals												0
	2019	No. of observations					1							1
		No. of individuals					4							4



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Aug	Sep	Oct	Nov	Dec	Totals	
Redshank	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations			N/A									0
		No. of individuals			2									2
	2019	No. of observations			5	2	5						12	
		No. of individuals			7	4	8						19	
Shoveler	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations												0
		No. of individuals												0
	2019	No. of observations	2			2	1						5	
		No. of individuals	21			2	2						25	
Tufted Duck	2017	No. of observations										N/A		0
		No. of individuals										4		4
	2018	No. of observations	N/A		N/A									0
		No. of individuals	5		6									11
	2019	No. of observations	1	1	3	1	5						11	
		No. of individuals	2	2	13	4	14						35	
Wigeon	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations								2	1			3
		No. of individuals								15	10			25
	2019	No. of observations	4	1	1				1				7	
		No. of individuals	91	20	14				1				126	



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Aug	Sep	Oct	Nov	Dec	Totals	
Buzzard	2017	No. of observations										N/A		0
		No. of individuals										2		2
	2018	No. of observations	N/A		N/A				1	7		3		11
		No. of individuals	2		2				2	10		3		19
	2019	No. of observations	3	9	4									16
		No. of individuals	3	11	4									18
Sparrowhawk	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations			1						1			2
		No. of individuals			1						1			2
	2019	No. of observations	2		1									3
		No. of individuals	2		1									3
Kestrel	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations			1					3	1	4		9
		No. of individuals			1					3	1	4		9
	2019	No. of observations	1		3									4
		No. of individuals	1		3									4
Ringed Plover	2017	No. of observations												0
		No. of individuals												0
	2018	No. of observations												0
		No. of individuals												0
	2019	No. of observations				1	2		1					4
		No. of individuals				2	3		1					6



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Aug	Sep	Oct	Nov	Dec	Totals	
Teal	2017	No. of observations										N/A		0
		No. of individuals										9		9
	2018	No. of observations	N/A											0
		No. of individuals	15											15
	2019	No. of observations												0
		No. of individuals												0

2017/2018 winter surveys were undertaken by Biosphere Environmental Services (BES), consisting of walked transects within the development site during November, January and March. Shaded cells are those months were no surveys were undertaken. The remaining surveys between the period of August 2018 and September 2019 were undertaken by MKO and comprised of a combination of walked transects within the development site and Wildfowl Distribution and abundance surveys within 1km of the development site.