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APPENDIX 7-3 (SUMMARY TABLES)

Table 1-1 Vantage Point Survey Effort Summary

Survey Season	Months	Minimum Effort per VP
2017/2018 Non-Breeding Season (4VPs)	Sep - Mar	42 hours/VP
2018 Breeding Season (4VPs)	Apr - Sep	36 hours/VP
2018/2019 Non-Breeding Season (4VPs)	Oct - Mar	36 hours/VP
2019 Breeding Season (4VPs)	Apr - Sep	36 hours/VP

Table 1-2 Monthly distribution of flight activity for target species during VP Surveys.

Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals	
Whooper Swan	2017	records														0
		bird-secs														0
	2018	records											2		1	3
		bird-secs											180		40	220
	2019	records			1											1
		bird-secs			20											20
Golden Plover	2017	records											1		3	4
		bird-secs											22		210	232
	2018	records		1									8	7	2	18
		bird-secs		35									1,305	1,545	296	3,181
	2019	records	3	2	1											6
		bird-secs	14	57	104											175
Hen Harrier	2017	records														0
		bird-secs														0
	2018	records				1		1		4					1	7
		bird-secs				15		10		280					25	330
	2019	records								1						1
		bird-secs								25						25
Merlin	2017	records														0
		bird-secs														0
	2018	records										1				1
		bird-secs										35				35
	2019	records														0
		bird-secs														0
Red Grouse	2017	records													1	1
		bird-secs													20	20
	2018	records					1									1



Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
		bird-secs					15								15
	2019	records	1								2				3
		bird-secs	6								8				14
Woodcock	2017	records													0
		bird-secs													0
	2018	records													0
		bird-secs													0
	2019	records				1									1
		bird-secs				8									8
Curlew	2017	records													0
		bird-secs													0
	2018	records				1									1
		bird-secs				10									10
	2019	records													0
		bird-secs													0
Buzzard	2017	records										1			1
		bird-secs										47			47
	2018	records		1		3							1		5
		bird-secs		384		470							400		1,254
	2019	records			2			2							4
		bird-secs			229			20							249
Sparrowhawk	2017	records													0
		bird-secs													0
	2018	records								1		1			2
		bird-secs								10		40			50
	2019	records						1							1
		bird-secs						118							118

Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals	
Kestrel	2017	records														0
		bird-secs														0
	2018	records				1		9	2	1			1		14	
		bird-secs				130		1,193	301	225			300		2,149	
	2019	records			1				1		1				3	
		bird-secs			176				360		18				554	
Snipe	2017	records												1	1	
		bird-secs												30	30	
	2018	records									2	1			3	
		bird-secs									100	3			103	
	2019	records				2	2	3							7	
		bird-secs				1810	670	877							3,357	
Based on analysis of all flight activity data within focus area, including data from VPs 1, 3 & 4 and observations of flights below and above the collision risk height band. Survey period = September 2017 - September 2019 (Shaded Cells were months not surveyed). Records = No. of Observations. Bird-secs = Total Duration of Flight(s).																

Table 1-3 All observations within focus area at PCH for target species during vantage point watches

Species	Values	VP1	VP3	VP4	Totals
Whooper Swan	Observations (All Bands)	2	1	1	4
	Duration in PCH (25-175m, in Seconds)	5,768	0	400	6,168
Golden Plover	Observations (All Bands)	18	10	0	28
	Duration in PCH (25-175m, in Seconds)	194,626	93,726	0	288,352
Hen Harrier	Observations (All Bands)	4	3	1	8
	Duration in PCH (25-175m, in Seconds)	40	25	0	65
Merlin	Observations (All Bands)	0	1	0	1
	Duration in PCH (25-175m, in Seconds)	0	15	0	15
Red Grouse	Observations (All Bands)	3	2	0	5
	Duration in PCH (25-175m, in Seconds)	0	0	0	0
Woodcock	Observations (All Bands)	0	1	0	1
	Duration in PCH (25-175m, in Seconds)	0	0	0	0
Curlew	Observations (All Bands)	0	0	1	1
	Duration in PCH (25-175m, in Seconds)	0	0	0	0
Buzzard	Observations (All Bands)	3	4	3	10
	Duration in PCH (25-175m, in Seconds)	447	554	400	1,401
Sparrowhawk	Observations (All Bands)	1	0	2	3
	Duration in PCH (25-175m, in Seconds)	0	0	110	110
Kestrel	Observations (All Bands)	1	13	3	17
	Duration in PCH (25-175m, in Seconds)	0	604	104	708
Snipe	Observations (All Bands)	9	2	0	11
	Duration in PCH (25-175m, in Seconds)	983	190	0	1,173

Based on analysis of all flight data at PCH for each target species recorded between September 2017 and September 2019. Any non-flight observations were excluded from data analysis. PCH=(no. of birds x total duration in PCH). PCH (Potential Collision Height) is considered as the area between 25-175m as a worst-case scenario for swept height of the turbine blades.

Table 1-4 Monthly Distribution of Non-Target Species during Vantage Point Surveys

Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Common Gull	2017	Present = X												
	2018	Present = X												
	2019	Present = X					X							
Grey Heron	2017	Present = X												
	2018	Present = X												
	2019	Present = X						X						
Kittiwake	2017	Present = X												
	2018	Present = X												
	2019	Present = X			X									
Lesser Black-backed Gull	2017	Present = X												
	2018	Present = X				X								
	2019	Present = X												
Mallard	2017	Present = X												
	2018	Present = X				X	X							
	2019	Present = X				X								
Blackbird	2017	Present = X												
	2018	Present = X	X		X	X	X			X		X	X	X
	2019	Present = X		X			X							
Blue Tit	2017	Present = X									X			X
	2018	Present = X			X								X	X
	2019	Present = X												
Bullfinch	2017	Present = X												X
	2018	Present = X												
	2019	Present = X												
Carrion Crow	2017	Present = X									X		X	
	2018	Present = X												
	2019	Present = X												

Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Chaffinch	2017	Present = X									X			
	2018	Present = X		X			X					X	X	
	2019	Present = X				X				X				
Chiffchaff	2017	Present = X												
	2018	Present = X												
	2019	Present = X				X					X			
Coal Tit	2017	Present = X												X
	2018	Present = X	X							X	X	X	X	X
	2019	Present = X				X					X			
Collared Dove	2017	Present = X												
	2018	Present = X			X									
	2019	Present = X												
Crossbill	2017	Present = X										X		
	2018	Present = X		X	X									
	2019	Present = X				X								
Cuckoo	2017	Present = X												
	2018	Present = X				X	X							
	2019	Present = X				X	X	X	X					
Dunnock	2017	Present = X												
	2018	Present = X									X		X	X
	2019	Present = X		X		X				X				
Fieldfare	2017	Present = X												X
	2018	Present = X										X	X	
	2019	Present = X												
Goldcrest	2017	Present = X												
	2018	Present = X										X		
	2019	Present = X												

Species	Year	Standardised	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Goldfinch	2017	Present = X												
	2018	Present = X									X			
	2019	Present = X									X			
Great Tit	2017	Present = X												
	2018	Present = X									X	X		
	2019	Present = X				X	X			X				
Grey Wagtail	2017	Present = X												
	2018	Present = X								X				
	2019	Present = X									X			
Hooded Crow	2017	Present = X										X	X	X
	2018	Present = X	X	X	X	X	X			X	X	X	X	X
	2019	Present = X	X	X		X	X		X		X			
Jay	2017	Present = X												X
	2018	Present = X	X							X				
	2019	Present = X		X					X		X			
Lesser Redpoll	2017	Present = X									X	X		X
	2018	Present = X								X	X			
	2019	Present = X		X		X	X	X	X					
Linnet	2017	Present = X									X		X	
	2018	Present = X		X	X									
	2019	Present = X				X								
Magpie	2017	Present = X												
	2018	Present = X		X										
	2019	Present = X				X	X							
Meadow Pipit	2017	Present = X									X	X	X	
	2018	Present = X	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
Mistle Thrush	2017	Present = X										X		
	2018	Present = X			X		X			X	X	X		X
	2019	Present = X		X		X	X	X		X	X			
Wheatear	2017	Present = X												
	2018	Present = X				X					X			
	2019	Present = X				X					X			
Pheasant	2017	Present = X												
	2018	Present = X				X	X			X	X			
	2019	Present = X						X						
Pied Wagtail	2017	Present = X												
	2018	Present = X									X			
	2019	Present = X												
Raven	2017	Present = X										X	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			
Redwing	2017	Present = X										X		
	2018	Present = X										X	X	
	2019	Present = X												
Reed Bunting	2017	Present = X												
	2018	Present = X			X						X			
	2019	Present = X									X			
Robin	2017	Present = X												X
	2018	Present = X	X	X	X	X	X				X	X	X	X
	2019	Present = X		X		X	X				X			
Siskin	2017	Present = X										X		
	2018	Present = 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	X				X			
	2019	Present = X				X	X				X			
Song Thrush	2017	Present = X									X			
	2018	Present = X			X	X								
	2019	Present = X		X		X	X							
Stonechat	2017	Present = X									X		X	
	2018	Present = X		X		X	X			X	X	X	X	X
	2019	Present = X				X	X	X	X		X			
Swallow	2017	Present = X												
	2018	Present = X				X	X			X	X			
	2019	Present = X							X		X			
Swift	2017	Present = X												
	2018	Present = X												
	2019	Present = X						X						
Whitethroat	2017	Present = X												
	2018	Present = X												
	2019	Present = X							X					
Willow Warbler	2017	Present = X												
	2018	Present = X					X							
	2019	Present = X				X								
Wood Pigeon	2017	Present = X												X
	2018	Present = X					X			X				
	2019	Present = X				X	X		X					
Wren	2017	Present = X									X		X	X
	2018	Present = X	X	X	X	X				X	X	X	X	
	2019	Present = X		X		X	X		X	X	X			

Based on analysis of all flight activity data within focus area, including data from VPs 1, 3 & 4. Survey period = September 2017 - September 2019 (Shaded Cells were months not surveyed).

Table 1-5 Monthly distribution of target species during Breeding Bird (Adapted Brown & Shephard) Surveys.

Species	Year	Standardised	Apr	May	Jun	Jul	Totals
Hen Harrier	2018	No. of observations					0
		No. of individuals					0
	2019	No. of observations			1		1
		No. of individuals			1		1
Merlin	2018	No. of observations		1			1
		No. of individuals		1			1
	2019	No. of observations					0
		No. of individuals					0
Red Grouse	2018	No. of observations				1	1
		No. of individuals				1	1
	2019	No. of observations			1		1
		No. of individuals			1		1
Buzzard	2018	No. of observations					0
		No. of individuals					0
	2019	No. of observations	1		1		2
		No. of individuals	1		1		2
Sparrowhawk	2018	No. of observations					0
		No. of individuals					0
	2019	No. of observations	1		1		2
		No. of individuals	1		1		2

Species	Year	Standardised	Apr	May	Jun	Jul	Totals
Kestrel	2018	No. of observations		1		1	2
		No. of individuals		1		1	2
	2019	No. of observations	1			4	5
		No. of individuals	1			4	5
Snipe	2018	No. of observations	3			2	5
		No. of individuals	4			2	6
	2019	No. of observations		2	1	1	4
		No. of individuals		2	1	1	4

Table 1-6 Monthly Distribution of Non-Target Species during Breeding Bird Surveys

Species	Year	Standardised	Apr	May	Jun	Jul
Blackbird	2018	Present = X	X	X		
	2019	Present = X				X
Blue Tit	2018	Present = X	X			
	2019	Present = X				X
Bullfinch	2018	Present = X				
	2019	Present = X				X
Chaffinch	2018	Present = X	X	X	X	
	2019	Present = X				X
Chiffchaff	2018	Present = X	X			
	2019	Present = X				
Coal Tit	2018	Present = X	X	X	X	
	2019	Present = X				
Crossbill	2018	Present = X	X			
	2019	Present = X				
Cuckoo	2018	Present = X	X	X	X	
	2019	Present = X				
Dunnock	2018	Present = X	X	X	X	
	2019	Present = X				X
Goldcrest	2018	Present = X	X		X	
	2019	Present = X				X
Great Black-backed Gull	2018	Present = X			X	
	2019	Present = X				
Grey Heron	2018	Present = X	X			
	2019	Present = X		X		

Species	Year	Standardised	Apr	May	Jun	Jul
Grey Wagtail	2018	Present = X			X	
	2019	Present = X			X	
Hooded Crow	2018	Present = X	X	X	X	
	2019	Present = X				X
House Martin	2018	Present = X	X			
	2019	Present = X				
Lesser Black-backed Gull	2018	Present = X				
	2019	Present = X			X	
Lesser Redpoll	2018	Present = X		X	X	
	2019	Present = X				X
Linnet	2018	Present = X	X	X		
	2019	Present = X				
Mallard	2018	Present = X	X	X		
	2019	Present = X	X			
Marsh Tit	2018	Present = X	X	X	X	
	2019	Present = X				
Meadow Pipit	2018	Present = X	X	X		
	2019	Present = X			X	X
Raven	2018	Present = X	X			
	2019	Present = X				X
Reed Bunting	2018	Present = X	X	X	X	
	2019	Present = X				
Robin	2018	Present = X	X	X	X	
	2019	Present = X				

Species	Year	Standardised	Apr	May	Jun	Jul
Siskin	2018	Present = X	X	X	X	
	2019	Present = X				X
Skylark	2018	Present = X	X		X	
	2019	Present = X				
Stonechat	2018	Present = X				
	2019	Present = X				X
Willow Warbler	2018	Present = X	X	X	X	
	2019	Present = X				X
Wood Pigeon	2018	Present = X	X			
	2019	Present = X				
Wren	2018	Present = X	X		X	
	2019	Present = X				X

Table 1-7 Monthly distribution of observations during Breeding Raptor Surveys

Species	Year	Standardised	Apr	May	Jun	Jul	Totals
Hen Harrier	2018	No. of observations		1			1
		No. of individuals		1			1
	2019	No. of observations				1	1
		No. of individuals				1	1
Peregrine	2018	No. of observations				1	1
		No. of individuals				1	1
	2019	No. of observations					0
		No. of individuals					0
Buzzard	2018	No. of observations	1	3			4
		No. of individuals	1	3			4
	2019	No. of observations	1	3	1		5
		No. of individuals	2	4	1		7
Sparrowhawk	2018	No. of observations	2	4		3	9
		No. of individuals	2	4		4	10
	2019	No. of observations		3	1		4
		No. of individuals		3	1		4
Kestrel	2018	No. of observations	3	3	2	3	11
		No. of individuals	3	3	2	3	11
	2019	No. of observations			1	1	2
		No. of individuals			1	1	2

Table 1-8 Monthly distribution for target species during Winter Transect Surveys

Species	Year	Standardised	Jan	Mar	Oct	Dec	Totals
Golden Plover	2017	No. of observations					0
		No. of individuals					0
	2018	No. of observations			1		1
		No. of individuals			40		40
	2019	No. of observations	1				1
		No. of individuals	30				30
Kestrel	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

Table 1-9 Monthly Distribution of Non-Target Species during Winter Transect Surveys

Species	Year	Standardised	Jan	Mar	Oct	Dec
Blackbird	2017	Present = X			X	
	2018	Present = X		X		
	2019	Present = X		X		
Blue Tit	2017	Present = X			X	X
	2018	Present = X	X	X		X
	2019	Present = X	X	X		
Bullfinch	2017	Present = X				X
	2018	Present = X	X			
	2019	Present = X				
Chaffinch	2017	Present = X				
	2018	Present = X		X		
	2019	Present = X		X		
Coal Tit	2017	Present = X			X	X
	2018	Present = X	X	X		X
	2019	Present = X		X		
Crossbill	2017	Present = X			X	X
	2018	Present = X	X	X		
	2019	Present = X				
Dunnock	2017	Present = X			X	X
	2018	Present = X		X		
	2019	Present = X				

Species	Year	Standardised	Jan	Mar	Oct	Dec
Fieldfare	2017	Present = X			X	
	2018	Present = X				
	2019	Present = X				
Goldcrest	2017	Present = X				
	2018	Present = X				
	2019	Present = X	X	X		
Goldfinch	2017	Present = X				
	2018	Present = X				X
	2019	Present = X	X			
Great Tit	2017	Present = X			X	
	2018	Present = X	X			
	2019	Present = X	X	X		
Hooded Crow	2017	Present = X				X
	2018	Present = X	X	X		X
	2019	Present = X				
Jay	2017	Present = X				X
	2018	Present = X	X			
	2019	Present = X				
Lesser Redpoll	2017	Present = X				X
	2018	Present = X				
	2019	Present = X	X	X		

Species	Year	Standardised	Jan	Mar	Oct	Dec
Linnet	2017	Present = X				
	2018	Present = X	X	X		X
	2019	Present = X				
Long-tailed Tit	2017	Present = X			X	X
	2018	Present = X	X			
	2019	Present = X				
Marsh Tit	2017	Present = X				
	2018	Present = X	X	X		
	2019	Present = X				
Meadow Pipit	2017	Present = X			X	X
	2018	Present = X	X	X		X
	2019	Present = X		X		
Raven	2017	Present = X			X	X
	2018	Present = X		X		X
	2019	Present = X	X			
Redwing	2017	Present = X			X	
	2018	Present = X				
	2019	Present = X				
Reed Bunting	2017	Present = X				X
	2018	Present = X				
	2019	Present = X				

Species	Year	Standardised	Jan	Mar	Oct	Dec
Robin	2017	Present = X			X	X
	2018	Present = X	X	X		
	2019	Present = X	X	X		
Siskin	2017	Present = X			X	
	2018	Present = X				
	2019	Present = X				
Treetreeper	2017	Present = X				
	2018	Present = X				X
	2019	Present = X	X			
Wren	2017	Present = X			X	X
	2018	Present = X	X	X		X
	2019	Present = X	X	X		