

18 Summary of Residual Effects

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18 Summary of Residual Effects

18.1 Introduction

- 18.1.1 Table 18.1 and Table 18.2 provide a quick reference to each of the significant residual environmental effects identified in the technical sections of the EIA, as well as a cross reference to the relevant mitigation measures identified.
- 18.1.2 Table 18.3 provides a summary of the cumulative effects of the Proposed Development in combination with other proposed, consented and operation developments within the area.

Table 18.1 - Summary of Residual Effects – Construction Phase

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
6. Landscape and Visual					
Physical Landscape Effects					
Agricultural Land	Not significant	N/A	None	Not significant	N/A
Landscape Character Effects					
Inclined Coastal Pastures LCT Quanterness LCU	Significant	Adverse	None	Significant	Adverse
Inclined Coastal Pastures LCT Coubister LCU	Significant	Adverse	None	Significant	Adverse
Inclined Coastal Pastures LCT Gorseness LCU	Significant – south Not significant – remainder of LCU	Adverse	None	Significant – south Not significant – remainder of LCU	Adverse
Rolling Hill Fringe LCT Wideford Hill LCU	Significant – south and west of the site	Adverse	None	Significant – south and west of the site Not significant – east and south of Wideford Hill	Adverse

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
	Not significant – east and south of Wideford Hill				
Rolling Hill Fringe LCT Settiscarth LCU	Significant – south Not significant – remainder of LCU	Adverse	None	Significant – south Not significant – remainder of LCU	Adverse
Moorland Hills LCT Wideford Hill LCU	Significant – northern side Not significant – southern side	Adverse	None	Significant – northern side Not significant – southern side	Adverse
Moorland Hills LCT West Mainland LCU	Significant - south Not significant	Adverse	None	Significant - south Not significant - remainder of the LCU	Adverse
Ridgeline Island Landscapes LCT Shapinsay LCU	Significant – south-west Not significant – remainder of LCU	Adverse	None	Significant – south-west Not significant – remainder of LCU	Adverse

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Low Island Pastures LCT Kirkwall LCU	Significant – west coast Not significant– remainder of LCU	Adverse	None	Significant – west coast Not significant - remainder of LCU	Adverse
Coastal Basins LCT Isbister LCU	Significant - south Not significant - north			Significant – south (out to 6 km) Not significant - north	
Coastal Basins LCT Kirkwall LCU	Significant – north-west Not significant – remainder of the LCU	Adverse	None	Significant – north-west Not significant – remainder of the LCU	Adverse
Peatland Basins LCT Breck of Cruan LCU	Significant - south Not significant - north	Adverse	None	Significant - south Not significant - north	Adverse
Isolated Coastal Knolls LCT Gorseness LCU	Significant – south	Adverse	None	Significant - south	Adverse

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
	Not significant - north			Not significant - north	
Undulating Island Pastures LCT Kirkwall LCU	Not significant	Adverse	None	Not significant	Adverse
Whaleback Islands LCT Gairsay LCU	Not significant	Adverse	None	Not significant	Adverse
Landscape Designations					
Wide Firth RCCA	Significant - remainder of RCCA Not significant - north	Adverse	None	Significant Not significant - north	Adverse
Kirkwall RCCA	Significant – Car Ness Not significant – remainder of LCU			Significant – Car Ness Not significant – remainder of LCU	
West Shapinsay RCCA	Significant – south-west			Significant – south-west Not significant – remainder of LCU	

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
	Not significant – remainder of LCU				
Orkney – Hoy and West Mainland NSA	Not significant			Not significant	
Balfour Castle GDL	Significant – south-west Not significant – remainder of GDL			Significant – south west Not significant – remainder of GDL	
Visual Effects					
VP1: Wideford Hill	Significant	Adverse	None	Significant	Adverse
VP 2: Hatston	Significant			Significant	
VP 3: A965 west of Quanterness	Significant			Significant	
VP 4: Kirkwall Harbour	Significant			Significant	
VP 5: Finstown	Significant			Significant	
VP 6: A966 north of Coubister	Significant			Significant	
VP 7: Gorseness	Significant			Significant	

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
VP 8: Balfour Castle	Significant			Significant	
VP 9: Kirkwall to Shapinsay Ferry	Significant			Significant	
VP 10: Craigiefield, Car Ness	Significant			Significant	
VP 11: A961, Kirkwall	Not significant			Not significant	
VP 12: Quanterness	Significant			Significant	
VP 13: Cuween	Significant			Significant	
Sequential Assessment					
A965	Significant	Adverse	None	Significant	Adverse
A966	Significant – southern section Not significant – northern section			Significant – southern section Not significant – northern section	Adverse
Kirkwall	Significant - elevated or exposed parts			Significant - elevated or exposed parts	Adverse

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
	Not significant - remaining visual receptors			Not significant - remaining visual receptors	
Finstown	Significant - elevated or exposed parts Not significant - remaining visual receptors			Significant - elevated or exposed parts Not significant - remaining visual receptors	Adverse
7. Ornithology					
Greylag goose disturbance and displacement.	Barely Perceptible	Adverse	None	Barely Perceptible (not significant)	Adverse
Proposed SPA qualifying wildfowl and divers disturbance and displacement.	Barely Perceptible	Adverse	None	Barely Perceptible (not significant)	Adverse
Curlew disturbance and displacement.	Low	Adverse	Timing of works or pre-construction check for nesting birds. Exclusion zones during breeding season.	Low (not significant)	Adverse
Lapwing disturbance and displacement.	Low	Adverse	Timing of works or pre-construction check for nesting	Low (not significant)	Adverse

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
			birds. Exclusion zones during breeding season.		
Golden plover disturbance and displacement.	Barely Perceptible	Adverse	Timing of works or pre-construction check for nesting birds. Exclusion zones during breeding season.	Barely Perceptible (not significant)	Adverse
Oystercatcher disturbance and displacement.	Low	Adverse	Timing of works or pre-construction check for nesting birds. Exclusion zones during breeding season.	Low (not significant)	Adverse
Redshank disturbance and displacement.	Low	Adverse	Timing of works or pre-construction check for nesting birds. Exclusion zones during breeding season.	Low (not significant)	Adverse
Other wader disturbance and displacement.	Low	Adverse	Timing of works or pre-construction check for nesting birds. Exclusion zones during breeding season.	Barely Perceptible (not significant)	Adverse
Arctic tern disturbance and displacement.	Low	Adverse	Timing of works or pre-construction check for nesting birds. Exclusion zones during breeding season.	Barely Perceptible (not significant)	Adverse

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Gull disturbance and displacement.	Low	Adverse	Timing of works or pre-construction check for nesting birds. Exclusion zones during breeding season.	Barely Perceptible (not significant)	Adverse
8. Ecology					
Loss of habitat and disturbance to otter	Barely perceptible	Adverse	Implementation of Species Protection Plan.	Barely perceptible (not significant)	Adverse
Mortality to otter	Low	Adverse		Barely perceptible (not significant)	Adverse
9. Noise					
Noise from road traffic	Neutral	Adverse	None	Neutral (not significant)	Adverse
Noise from construction activities	Minor	Adverse	Implementation of good practice during construction works	Minor (not significant)	Adverse
10. Cultural Heritage					
Direct impacts on known non-designated regionally or nationally important archaeological remains present on the site	Negligible	Adverse	The Proposed Development has been designed so as to avoid direct impacts upon these three sites at Crossiecrown and Ramberry. All	None (not significant)	Beneficial

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
			three of which will be fenced prior to the onset of construction with buffers up to 100m employed.		
Direct impacts on known non-designated remains of negligible importance that are present on the site.	Minor	Adverse	A four-stage mitigation strategy; geophysical survey, trial trenching followed by excavation and post-excavation analysis will be undertaken.	Minor (not significant)	Adverse
Direct impacts on previously unrecorded non-designated regionally or nationally important archaeological remains that could be present on the site	Major	Adverse	A four-stage mitigation strategy; geophysical survey, trial trenching followed by excavation and post-excavation analysis will be undertaken.	Negligible (not significant)	Adverse
11. Geology, Hydrology and Hydrogeology					
Pollution from silt-laden runoff	Negligible to Minor	Adverse	No additional mitigation than the standard mitigation identified.	Negligible to Minor (not significant)	Adverse
Pollution from chemical contaminated runoff	Negligible to Minor	Adverse		Negligible to Minor (not significant)	Adverse
Soil compaction	Negligible	Adverse		Negligible (not significant)	N/A

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Effect on groundwater quality and flow	Minor	Adverse		Minor (not significant)	Adverse
12. Traffic and Transport					
Traffic impacts within Finstown	Minor	Adverse	No additional mitigation than the standard mitigation identified.	Minor (not significant)	Adverse
13. Socio-economic, Recreation and Tourism					
Economic Impact of up to £2.6 million GVA and 39 job years in Orkney	Minor	Beneficial	Not applicable	Minor (not significant)	Beneficial
Economic impact of up to £10.4 million GVA and 161 job years in Scotland	Negligible	Beneficial	Not applicable	Negligible (not significant)	Beneficial
14. Aviation and Radar					
No construction phase effects anticipated					
15. Shadow Flicker					
No construction phase effects anticipated					
16. Other Issues					

Description of Effect	Significance of Likely Effect		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Dust	None	N/A	Implementation of Dust and Air Pollution Management Plan	None	N/A
Construction traffic air pollution	None	N/A	N/A	None	N/A

Table 18.2 Summary of Residual Effects - Operation

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
6. Landscape and Visual					
Physical Landscape Effects					
Agricultural Land	N/A	N/A	None	N/A	N/A
Landscape Character Effects					
Inclined Coastal Pastures LCT Quanterness LCU	Significant	Adverse	None	Significant	Adverse
Inclined Coastal Pastures LCT Coubister LCU	Significant	Adverse	None	Significant	Adverse
Inclined Coastal Pastures LCT Gorseness LCU	Significant – south Not significant – remainder of LCU	Adverse	None	Significant – south Not significant – remainder of LCU	Adverse
Rolling Hill Fringe LCT Wideford Hill LCU	Significant – south and west of the site	Adverse	None	Significant – south and west of the site Not significant – east and south of Wideford Hill	Adverse

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
	Not significant – east and south of Wideford Hill				
Rolling Hill Fringe LCT Settiscarth LCU	Significant – south Not significant – remainder of LCU	Adverse	None	Significant – south Not significant – remainder of LCU	Adverse
Moorland Hills LCT Wideford Hill LCU	Significant – northern side Not significant – southern side	Adverse	None	Significant – northern side Not significant – southern side	Adverse
Moorland Hills LCT West Mainland LCU	Significant - south Not significant - remainder of the LCU	Adverse	None	Significant - south Not significant - remainder of the LCU	Adverse
Ridgeline Island Landscapes LCT Shapinsay LCU	Significant – south-west Not significant – remainder of LCU	Adverse	None	Significant – south-west Not significant – remainder of LCU	Adverse

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Low Island Pastures LCT Kirkwall LCU	Significant – west coast Not significant - remainder of LCU	Adverse	None	Significant – west coast Not significant - remainder of LCU	Adverse
Coastal Basins LCT Isbister LCU	Significant – south (out to 6 km) Not significant - north	Adverse	None	Significant – south (out to 6 km) Not significant - north	Adverse
Coastal Basins LCT Kirkwall LCU	Significant – north-west Not significant – remainder of the LCU	Adverse	None	Significant – north-west Not significant – remainder of the LCU	Adverse
Peatland Basins LCT Breck of Cruan LCU	Significant - south Not significant - north	Adverse	None	Significant - south Not significant - north	Adverse
Isolated Coastal Knolls LCT Gorseness LCU	Significant - south Not significant - north	Adverse	None	Significant - south Not significant - north	Adverse

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Undulating Island Pastures LCT Kirkwall LCU	Not significant	Adverse	None	Not significant	Adverse
Whaleback Islands LCT Gairsay LCU	Not significant	Adverse	None	Not significant	Adverse
Landscape Designations					
Wide Firth RCCA	Significant - remainder of RCCA Not significant - north	Adverse	None	Significant - remainder of RCCA Not significant - north	Adverse
Kirkwall RCCA	Significant – Car Ness Not significant – remainder of LCU			Significant – Car Ness Not significant – remainder of LCU	
West Shapinsay RCCA	Significant – south-west Not significant – remainder of LCU			Significant – south-west Not significant – remainder of LCU	
Orkney – Hoy and West Mainland NSA	Not significant			Not significant	

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Balfour Castle GDL	Significant – south terraces Not significant – remainder of GDL			Significant – south terraces Not significant – remainder of GDL	
Visual Effects					
VP1: Wideford Hill	Significant	Adverse	None	Significant	Adverse
VP 2: Hatston	Significant			Significant	
VP 3: A965 west of Quanterness	Significant			Significant	
VP 4: Kirkwall Harbour	Significant			Significant	
VP 5: Finstown	Significant			Significant	
VP 6: A966 north of Coubister	Significant			Significant	
VP 7: Gorseness	Significant			Significant	
VP 8: Balfour Castle	Significant			Significant	
VP 9: Kirkwall to Shapinsay Ferry	Significant			Significant	
VP 10: Craigiefield, Car Ness	Significant			Significant	

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
VP 11: A961, Kirkwall	Not significant			Not significant	
VP 12: Quanterness	Significant			Significant	
VP 13: Cuween	Significant			Significant	
Sequential Assessment					
A965	Significant			Significant	
A966	Significant – southern section Not significant – northern section	Adverse	None	Significant – southern section Not significant – northern section	Adverse
Kirkwall	Significant - elevated or exposed parts Not significant - remaining visual receptors			Significant - elevated or exposed parts Not significant - remaining visual receptors	

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Finstown	Significant - elevated or exposed parts Not significant - remaining visual receptors			Significant - elevated or exposed parts Not significant - remaining visual receptors	
7. Ornithology					
Greylag goose displacement and collision mortality	Low	Adverse	None	Low (not significant)	Adverse
Curlew displacement and collision mortality	Barely Perceptible	Adverse	Grazing management to improve breeding habitat on-site to retain and improve local population density.	Barely perceptible (not significant)	Beneficial
Lapwing displacement and collision mortality	Barely Perceptible	Adverse	Grazing management to improve breeding habitat on-site to retain and improve local population density.	Barely perceptible (not significant)	Beneficial
Golden Plover displacement and collision mortality	Barely Perceptible	Adverse	None	Barely perceptible (not significant)	Adverse

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Oystercatcher displacement and collision mortality	Barely Perceptible	Adverse	Grazing management to improve breeding habitat on-site to retain and improve local population density.	Barely perceptible (not significant)	Beneficial
Redshank displacement and collision mortality	Barely Perceptible	Adverse	Grazing management to improve breeding habitat on-site to retain and improve local population density.	Barely perceptible (not significant)	Beneficial
Other wader species displacement and collision mortality	Low	Adverse	Grazing management to improve breeding habitat on-site to retain and improve local population density.	Barely perceptible (not significant)	Beneficial
8. Ecology					
Effects on otter populations on site during operation	Barely perceptible	Adverse	None	Barely perceptible (not significant)	Adverse
9. Noise					
Noise from fixed non-turbine plant	Minor	Adverse	Selection of plant which complies with specified maximum sound power level, or installation of appropriate acoustic enclosure where plant sound power level is	Minor (not significant)	Adverse

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
			above maximum specified, such that the derived noise limits are met.		
Noise from wind turbines at all NSRs except NSR1 and NSR2	Neutral to Minor	Adverse	None	Neutral to Minor (not significant)	Adverse
Noise from wind turbines at NSR1 and NSR2	Moderate	Adverse	Selection of turbine model, implementation of turbine noise management plan and post-commissioning compliance noise assessment	Minor (not significant)	Adverse
10. Cultural Heritage					
Moderate significant indirect effects on the settings of two Scheduled Neolithic chambered cairns; Wideford Hill and Cuween Hill	Moderate	Adverse	None	Moderate (significant)	Adverse
Moderate significant indirect effects on the settings of one Scheduled Neolithic chambered cairns; Quanterness	Moderate	Adverse	Retention of the tree belt at Quanterness as agreed with landowner (refer to Appendix 10.4).	Minor (not significant)	Adverse
11. Geology, Hydrology and Hydrogeology					
Change in surface water drainage	Negligible	Adverse	None	Negligible (not significant)	Adverse

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
12. Traffic and Transport					
No operational effects anticipated.					
13. Socio-economic, Recreation and Tourism					
Annual economic impact of up to £0.3 million GVA and four jobs in Orkney	Negligible	Beneficial	Not applicable	Negligible (not significant)	Beneficial
Annual economic impact of up to £0.5 million GVA and nine jobs in Scotland	Negligible	Beneficial	Not applicable	Negligible (not significant)	Beneficial
Annual payment of an estimated up to £0.5 million in non-domestic rates	Minor	Beneficial	Not applicable	Minor (not significant)	Beneficial
Annual payment of £144,000 in a location specific community benefit fund	Minor	Beneficial	Not applicable	Minor (not significant)	Beneficial
Annual profit of £2.88 million from ownership	Minor	Beneficial	Not applicable	Minor (not significant)	Beneficial
Indirect contribution to the interconnector cable in Orkney	Moderate	Beneficial	Not applicable	Moderate (significant)	Beneficial
Indirect contribution to the interconnector cable in Scotland	Negligible	Beneficial	Not applicable	Negligible (not significant)	Beneficial

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Effect on tourism assets	Negligible	n/a	Not applicable	Negligible (not significant)	N/A
Effect on accommodation providers	Negligible	n/a	Not applicable	Negligible (not significant)	N/A
Effect on core paths and recreational access	Negligible	n/a	Not applicable	Negligible (not significant)	N/A
14. Aviation and Radar					
No operational effects anticipated					
15. Shadow Flicker					
Shadow flicker nuisance on residential receptor	Significant	Adverse	Wind Farm Shadow Flicker Protocol.	Not significant	Adverse
16. Other Issues					
There are no effects anticipated to telecommunications					
Television	Significant	Adverse	Investigation of complaint and provision of alternative reception if required.	No effect	N/A

Description of Effect	Significance of Likely Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Disruption to marine radar	Significant	Adverse	Provision of bond to mitigate any impacts identified	Not-significant	N/A
Operation traffic air pollution	None	N/A	N/A	None	N/A

Table 18.3 Cumulative Effects

Receptor	Description of Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
6. Landscape and Visual				
Physical Landscape Effects				
Agricultural Land	Landscape & visual	N/A	None	N/
Landscape Character Effects				
Inclined Coastal Pastures LCT Quanterness LCU	Landscape & visual	Hammars Hill, Rennibister, Crownness Business Park	Not significant	Adverse
Inclined Coastal Pastures LCT Coubister LCU	Landscape & visual	Hammars Hill, Rennibister, Crownness Business Park	Not significant	Adverse
Inclined Coastal Pastures LCT Gorseness LCU	Landscape & visual	Hammars Hill, Rennibister, Crownness Business Park	Not significant	Adverse
Rolling Hill Fringe LCT Wideford Hill LCU	Landscape & visual	Hammars Hill, Rennibister, Crownness Business Park, Burgar Hill	Not significant	Adverse
Rolling Hill Fringe LCT Settiscarth LCU	Landscape & visual	Hammars Hill, Burgar Hill	Not significant	Adverse

Receptor	Description of Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
Moorland Hills LCT Wideford Hill LCU	Landscape & visual	Hammars Hill, Burgar Hill	Not significant	Adverse
Moorland Hills LCT West Mainland LCU	Landscape & visual	Hammars Hill, Burgar Hill	Not significant	Adverse
Ridgeline Island Landscapes LCT Shapinsay LCU	Landscape & visual	Hammars Hill, Burgar Hill	Not significant	Adverse
Low Island Pastures LCT Kirkwall LCU	Landscape & visual	None	Not significant	Adverse
Coastal Basins LCT Isbister LCU	Landscape & visual	Hammars Hill	Not significant	Adverse
Coastal Basins LCT Kirkwall LCU	Landscape & visual	None	Not significant	Adverse
Peatland Basins LCT Breck of Cruan LCU	Landscape & visual	Hammars Hill	Not significant	Adverse
Isolated Coastal Knolls LCT Gorseness LCU	Landscape & visual	Hammars Hill	Not significant	Adverse
Undulating Island Pastures LCT Kirkwall LCU	Landscape & visual	None	Not significant	Adverse

Receptor	Description of Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
Whaleback Islands LCT Gairsay LCU	Landscape & visual	Hammars Hill, Burgar Hill	Not significant	Adverse
Landscape Designations				
Wide Firth RCCA	Landscape & visual	Hammars Hill	Not significant	Adverse
Kirkwall RCCA	Landscape & visual	Crowness Business Park	Not significant	Adverse
West Shapinsay RCCA	Landscape & visual	Hammars Hill, Burgar Hill	Not significant	Adverse
Orkney – Hoy and West Mainland NSA	Landscape & visual	Hammars Hill, Burgar Hill	Not significant	Adverse
Balfour Castle GDL	Landscape & visual	Hammars Hill, Burgar Hill	Not significant	Adverse
Visual Effects				
VP1: Wideford Hill	Landscape & visual	Hammars Hill, Burgar Hill, Rennibister	Not significant	Adverse
VP 2: Hatston	Landscape & visual	Hammars Hill, Burgar Hill, Crowness Business Park	Not significant	Adverse
VP 3: A965 west of Quanterness	Landscape & visual	Hammars Hill, Rennibister	Not significant	Adverse
VP 4: Kirkwall Harbour	Landscape & visual	Hammars Hill, Burgar Hill, Crowness Business Park	Not significant	Adverse
VP 5: Finstown	Landscape & visual	Hammars Hill	Not significant	Adverse

Receptor	Description of Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
VP 6: A966 north of Coubister	Landscape & visual	Hammars Hill	Not significant	Adverse
VP 7: Gorseness	Landscape & visual	Hammars Hill	Not significant	Adverse
VP 8: Balfour Castle	Landscape & visual	Hammars Hill, Burgar Hill	Not significant	Adverse
VP 9: Kirkwall to Shapinsay Ferry	Landscape & visual	Hammars Hill, Burgar Hill, Crowness Business Park, Rennibister	Not significant	Adverse
VP 10: Craigiefield, Car Ness	Landscape & visual	Hammars Hill, Burgar Hill, Crowness Business Park	Not significant	Adverse
VP 11: A961, Kirkwall	Landscape & visual	Hammars Hill, Burgar Hill, Crowness Business Park	Not significant	Adverse
VP 12: Quanterness	Landscape & visual	Hammars Hill, Crowness Business Park, Rennibister	Not significant	Adverse
VP 13: Cuween	Landscape & visual	Hammars Hill, Rennibister	Not significant	Adverse
Sequential Assessment				
A965	Landscape & visual	Hammars Hill, Burgar Hill, Crowness Business Park, Rennibister	Not significant	Adverse
A966	Landscape & visual	Hammars Hill	Not significant	Adverse
Kirkwall	Landscape & visual	Hammars Hill, Burgar Hill, Crowness Business Park	Not significant	Adverse

Receptor	Description of Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
Finstown	Landscape & visual	Hammars Hill	Not significant	Adverse
7. Ornithology				
Curlew	No Collision risk values were available from other windfarm developments on Orkney. Some temporary displacement is likely during construction however with a HMP in place this will be offset.	N/A	Barely Perceptible	Adverse
Lapwing	No Collision risk values were available from other windfarm developments on Orkney. Some temporary displacement is likely during construction however with a HMP in place this will be offset.	N/A	Barely Perceptible	Adverse
Golden Plover	Cumulative collision risk values for this species are very low. Some temporary displacement is likely during construction however with a HMP in place this will be offset.	Hammers Hill	Barely Perceptible	Adverse
Oystercatcher	No Collision risk values were available from other windfarm developments on Orkney. Some	N/A	Barely Perceptible	Adverse

Receptor	Description of Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
	temporary displacement is likely during construction however with a HMP in place this will be offset.			
Redshank	No Collision risk values were available from other windfarm developments on Orkney. Some temporary displacement is likely during construction however with a HMP in place this will be offset.	N/A	Barely Perceptible	Adverse
Greylag Goose	Cumulative collision mortality across Orkney is considered to be 3.9 birds per annum for this species of which the Proposed Development contributes 0.1. Some temporary displacement is likely during construction however with a HMP in place this will be offset.	Berriedale	Low	Adverse
8. Ecology				
Otter	Mortality and Habitat loss	Rennibister, Crowness Business Park, Akla, Hammars Hill, Work Farm)	No effect	N/A
9. Noise				

Receptor	Description of Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
All NSRs	Cumulative wind turbine noise	Rennibister, Hatston and Haughhead wind turbines. South Breck wind turbines (NSR10, NSR11 and NSR12 only)	Minor	Adverse
10. Cultural Heritage				
Cuween Hill chambered cairn, Wideford Hill chambered cairn, Quanterness chambered cairn, Balfour Castle, Ingashowe Broch, Hillock Broch, Burness Broch and Chapel, St Mary's Chapel, Kirkwall Cathedral, Bishop's Palace, Earl's Palace, Kirkwall Conservation Area, Hellier Holm chambered cairn, Head of Work Long cairn	Setting effects	Howe, Crowness Business Park, Rennibister, Hammars Hill, Burgar Hill	No additional cumulative effect	N/A
Unknown archaeological remains	Direct effect	Howe, Crowness Business Park, Rennibister, Hammars Hill, Burgar Hill	Negligible effect	N/A

Receptor	Description of Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
11. Geology, Hydrology and Hydrogeology				
No significant cumulative effects anticipated				
12. Traffic and Transport				
Finstown	Traffic impacts assuming construction date of 2023	Costa Head Wind Farm	No cumulative effects	
Finstown	Traffic impacts assuming construction date of 2024	Costa Head Wind Farm	Minor	Adverse
13. Socio-economic, Recreation and Tourism				
No significant cumulative effects anticipated				
14. Aviation and Radar				
No significant cumulative effects anticipated				
15. Shadow Flicker				
Residential Property	Shadow flicker nuisance	Rennibister and Crowness Business Park	None	N/A
16. Other Issues				
No significant cumulative effects are anticipated to telecommunications				

Receptor	Description of Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
No significant cumulative effects are anticipated to marine radar				
No significant cumulative effects are anticipated to air quality				