

19 Summary of Residual Effects

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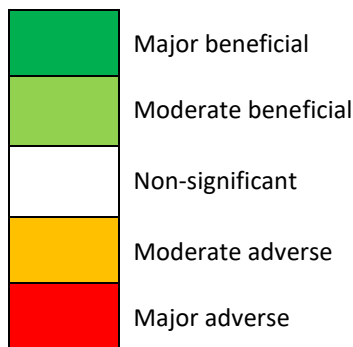
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19 Summary of Residual Effects

19.1 Introduction

19.1.1 Tables 19.1 and 19.2 provide a quick reference to the significant residual environmental effects identified in the technical sections of this Environmental Impact Assessment (EIA) Report, as well as a cross reference to the relevant mitigation measures identified.

19.1.2 The residual effects are highlighted in a “traffic light” formula for easy identification of beneficial and adverse effects as shown below. Text in **bold** shows where an effect is considered to be significant.



19.1.3 Table 19.3 provides a summary of the cumulative effects of the Proposed Development in combination with other proposed, consented and operational developments within the local area.

Table 19.1 - Summary of Residual Effects – Construction and Decommissioning/Restoration Phases

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Landscape and Visual					
Landscape Character Types and Sub-Types.	Worst-case Moderate/ Minor (Not Significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate/Minor (Not Significant)	Adverse
Visual receptors within the study area.	Worst-case Moderate (Not significant)	Adverse		Worst-case Moderate (Not significant)	Adverse
Ecology and Nature Conservation					
Habitat loss (Blanket bog and wet modified bog).	Negligible	Adverse	Implementation of Habitat Management Plan (HMP) to restore and enhance bog habitats.	Minor	Beneficial
Habitat loss and disturbance (<i>Nyctalus</i> bats).	Minor	Adverse	None required.	Minor	Adverse
Habitat loss and disturbance (Pipistrelle bats).	Negligible	Adverse	None required.	Negligible	Adverse
Ornithology					
Hen harrier	Minor (Not significant)	Adverse	Breeding Bird Protection Plan (BBPP) and pre-construction surveys. Spatial and temporal restrictions of construction activity if required.	Not significant	Adverse
Merlin	Minor (Not significant)	Adverse		Not significant	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Goshawk	Negligible (Not significant)	Adverse		Not significant	Adverse
Black grouse	Minor (Not significant)	Adverse		Not significant	Adverse
Curlew	Minor (Not significant)	Adverse		Not significant	Adverse
Golden plover	Minor (Not significant)	Adverse		Not significant	Adverse
Noise and Vibration					
Construction noise.	Not Significant	Adverse	Control of working hours and best working practices.	Not Significant	Adverse
Cultural Heritage					
Potential direct impacts on unrecorded archaeological remains within the Proposed Development footprint.	Moderate	Adverse	Implementation of mitigation proposals where required through planning condition.	Minor	Adverse
Potential direct impacts on any buried remains surviving within the Proposed Development footprint.	Negligible	Adverse	Implementation of mitigation proposals where required through planning condition.	Negligible	Adverse
Hydrology, Hydrogeology and Geology					
Direct effects on geological SSSIs.	None	N/A	Demarcation of Birkenhead Burn SSSI during construction to ensure no accidental access to this area by plant. Geological observation and recording of exposures during excavation.	Minor	Beneficial

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
			Installation of information board or similar at Birkenhead Burn SSSI.		
Pollution from sediment run-off and/or chemical contaminated run-off.	Major	Adverse	50 m buffer around watercourses wherever possible. Water quality monitoring. CEMP and construction site management.	Minor to Moderate	Adverse
Pollution from forestry felling.	Major	Adverse	Key-hole felling and re-planting. Felling works in accordance with standard good forestry practice. Buffering of watercourses, management of riparian zone vegetation, drainage plan, brush control in watercourses and buffer areas, removing any accidental blockages, minimising soil damage	Minor to Moderate	Adverse
Changes to groundwater flow regime.	Negligible	Adverse	Pre-construction site investigation. CEMP and construction site management.	Negligible	Adverse
Indirect effect on the Muirkirk Uplands SSSI.	Minor to Moderate	Adverse	Pre-construction site investigation. CEMP and construction site management.	Minor	Adverse
Removal of and impact on peat.	Moderate	Adverse	Pre-construction site investigation. Avoidance of deep peat for borrow pit excavations. Micro-siting infrastructure where required and appropriate, if unexpected deeper peat is identified. Implementation of Peat Management Plan. Implementation of Habitat Management Plan.	Minor	Adverse
Peat landslide impact on watercourses.	Moderate	Adverse	Pre-construction site investigation to inform detailed design and geotechnical control measures. Avoidance of peat for borrow pit excavations.	Minor to Moderate	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
			Micro-siting infrastructure where required and appropriate.		
Loss of bank integrity.	Major	Adverse	Suitable water crossing design, regulated by CAR. CEMP and construction site management.	Minor	Adverse
Pollution from foul drainage.	Major	Adverse	50 m buffer around watercourses wherever possible. Water quality monitoring. CEMP and construction site management. Suitable foul drainage management in agreement with SEPA.	Minor	Adverse
Transport and Traffic					
Severance, pedestrian delay, pedestrian amenity, fear & intimidation, driver delay or accidents.	Negligible	Adverse	None proposed beyond employment of good practice measures.	Negligible	Adverse
Socio-economics, Recreation and Tourism					
Economic impact of £13.3 million GVA and 202 years of employment in South Lanarkshire.	Minor	Beneficial	N/A	Minor	Beneficial
Economic impact of £42.6 million GVA and 657 years of employment in Scotland.	Negligible	Beneficial	N/A	Negligible	Beneficial
Expenditure of construction workers in local economy.	Moderate	Beneficial	N/A	Moderate	Beneficial
Aviation, Radar and Telecommunication					

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Effects on aviation, radar and telecommunication interests during construction and decommissioning.	Negligible	Neutral	Aviation lighting will be installed as soon as practicable on erected turbines.	Negligible	Neutral
Shadow Flicker					
No shadow flicker effects during construction or decommissioning.					
Forestry					
Social Benefits of the Wind Farm Forest Plan.	Negligible	Adverse	Implementation of Wind Farm Forest Plan – public access, archaeological and landscape considerations are materially changed from the baseline.	Neutral	N/A
Economic Benefits of the Wind Farm Forest Plan.	Minor	Beneficial	Implementation of Wind Farm Forest Plan and Compensatory Planting to address reduced production – the loss of 61.96 ha of commercial woodland does not effect the economic viability of the forest or the wider industry and is being mitigated through compensatory planting.	Minor	Beneficial
Environmental Benefits of the Wind Farm Forest Plan.	Minor	Beneficial	Implementation of Wind Farm Forest Plan and Compensatory Planting to address woodland loss – minimal loss of woodland cover (61.96 ha) which is mitigated through compensatory planting and the generation of 126 MW of renewable energy.	Minor	Beneficial

Table 19.2 - Summary of Residual Effects – Operation

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Landscape and Visual					
<i>Landscape Character - Types in which the Turbines are located</i>					
Existing Baseline	Worst-case Major (Significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Major/moderate (Significant)	Adverse
Future Baseline	Worst-case Moderate (Significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate (Significant)	Adverse
<i>Landscape Character - Types within 15 km</i>					
Existing Baseline	Worst-case Major/ Moderate up to 3.5 km (Significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Major/moderate adjacent up to 3.5 km (Significant)	Adverse
	Worst-case Moderate (Significant) up to 7.5 km from the site	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate (Significant) up to 7.5 km from the site	Adverse
Future Baseline	Worst-case Major/ moderate adjacent to the site (Significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Major/moderate adjacent to the site (Significant)	Adverse
	Worst-case Moderate (Significant) up to 3.5 km from the site	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate (Significant) up to 3.5 km from the site	Adverse
Existing Baseline – East Ayrshire	Worst-case Moderate (Significant) up to 2.5 km from the site	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate (Significant) up to 2.5 km from the site	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Future Baseline – East Ayrshire	Worst-case Moderate (Significant) up to 2.5 km from the site	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate (Significant) up to 2.5 km from the site	Adverse
Visual Receptors - Viewpoints					
Assessment Viewpoints – <i>existing baseline</i>	Significant effects on 4 of the 18 representative viewpoints, extending up to 8.3 km from the site.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Significant effects on 4 of the 18 representative viewpoints, extending up to 8.3 km from the site.	Adverse
Assessment Viewpoints – <i>future baseline</i>	Significant effects on 1 of the 18 representative viewpoints, extending up to 3.6 km from the site.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Significant effects on 1 of the 18 representative viewpoints, extending up to 3.6 km from the site.	Adverse
Visual Receptors - Residential					
Residential properties within 2 km – <i>existing and future baseline</i>	Significant effects at 5 of the 12 assessed properties	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Significant effects at 5 of the 12 properties. Four of which are Major.	Adverse
Settlements 2 km to 5 km – <i>existing baseline</i>	Worst-case Major/moderate at Coalburn at 4.3 km (Significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Major/moderate at Coalburn at 4.3 km (Significant)	Adverse
Settlements 2 km to 5km – <i>future baseline</i>	Worst-case Moderate at Coalburn at 4.3 km (Not Significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate at Coalburn at 4.3 km (Not Significant)	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Settlements 5 km to 10 km – <i>existing baseline</i>	Worst-case Moderate up to 5.6 km (Significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate up to 5.6 km (Significant)	Adverse
Settlements 5 km to 10 km – <i>future baseline</i>	Worst-case Moderate (Not significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate (Not significant)	Adverse
Settlements beyond 10 km – <i>existing and future baseline</i>	Worst-case Minor (Not significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Minor (Not significant)	Adverse
Visual Receptors – Routes & Recreation					
Footpaths and Cycleways – <i>existing baseline</i>	Worst-case Major significant effects limited to Wider Network Paths crossing through the site	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case Major significant effects limited to Wider Network Paths crossing through the site	Adverse
	Worst-case Moderate (Not significant) for all other paths and routes	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case Moderate (Not significant) for all other paths and routes	Adverse
Footpaths and Cycleways – <i>future baseline</i>	Worst-case Major significant effects limited to Wider Network Path crossing through northern part of the site.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Major significant effects limited to Wider Network Path crossing through northern part of the site.	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
	Worst-case Moderate/minor (Not significant) for all other paths and routes.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate/minor (Not significant) for all other paths and routes	Adverse
Roads – <i>existing baseline</i>	Worst-case Moderate (Not significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate (Not significant)	Adverse
Roads – <i>future baseline</i>	Worst-case Moderate/minor (Not significant)	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate/minor (Not significant)	Adverse
Centres of Recreational and Tourism Activity.	Worst-case Moderate (Not significant) at Dalquhandy Opencast mine	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case Moderate (Not significant) at Dalquhandy Opencast mine	Adverse
Visual Effects of Turbine Lighting (2000 candela) – Landscape Character					
Landscape Character up to approximately 4km from the site – <i>existing baseline</i>	Worst-case Major (significant)	Adverse	The LVIA Lighting Assessment (Appendix 6.4) assesses potential effects of turbine lighting based on the ‘worst-case’ scenario of the 2000 candela lighting operating at full intensity and no reduction in directional intensity. In reality, the embedded mitigation built into the scheme would mean that in good visibility conditions these effects would be reduced when the 2000 candela lighting is	Worst-case Major (significant)	Adverse
Landscape Character up to approximately 4km from the site – <i>future baseline</i>	Worst-case Major (significant)	Adverse		Worst-case Major (significant)	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Landscape Character beyond 4km from the site – <i>existing baseline</i>	Worst-case Moderate (not significant)	Adverse	operating at a reduced intensity and the directional intensity mitigation would reduce effects in all conditions.	Worst-case Moderate (not significant)	Adverse
Landscape Character beyond 4km from the site – <i>future baseline</i>	Worst-case Moderate (not significant)	Adverse		Worst-case Moderate (not significant)	Adverse
Visual Effects of Turbine Lighting (2000 candela) – LVIA Viewpoints					
VP1 – Muirburn Place, Coalburn – <i>existing baseline</i>	Worst-case Moderate (significant)	Adverse	The LVIA Lighting Assessment (Appendix 6.4) assesses potential effects of turbine lighting based on the worst-case scenario of 2000 candela lighting operating at full intensity and no reduction in directional intensity. In reality, the embedded mitigation built into the scheme would mean that in good visibility conditions these effects would be reduced when the 2000 candela lighting is operating at a reduced intensity and the directional intensity mitigation would reduce effects in all conditions.	Worst-case Moderate (significant)	Adverse
VP1 – Muirburn Place, Coalburn – <i>future baseline</i>	Worst-case Moderate (not significant)	Adverse		Worst-case Moderate (not significant)	Adverse
VP4 – Minor Road, North Brackenridge – <i>existing baseline</i>	Worst-case Major/moderate (significant)	Adverse		Worst-case Major/moderate (significant)	Adverse
VP4 – Minor Road, North Brackenridge – <i>future baseline</i>	Worst-case Moderate (significant)	Adverse		Worst-case Moderate (significant)	Adverse
VP13 – Victory Park, Muirkirk – <i>existing baseline</i>	Worst-case Minor (not significant)	Adverse		Worst-case Minor (not significant)	Adverse
VP13 – Victory Park, Muirkirk – <i>future baseline</i>	Worst-case Minor (not significant)	Adverse		Worst-case Minor (not significant)	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Visual Effects of Turbine Lighting (2000 candela) – Settlements					
Coalburn – <i>existing baseline</i>	Worst-case Moderate (significant)	Adverse	The LVIA Lighting Assessment (Appendix 6.4) assesses potential effects of turbine lighting based on the worst-case scenario of 2000 candela lighting operating at full intensity and no reduction in directional intensity. In reality, the embedded mitigation built into the scheme would mean that in good visibility conditions these effects would be reduced when the 2000 candela lighting is operating at a reduced intensity and the directional intensity mitigation would reduce effects in all conditions.	Worst-case Moderate (significant)	Adverse
Coalburn – <i>future baseline</i>	Worst-case Moderate (not significant)	Adverse		Worst-case Moderate (not significant)	Adverse
Lesmahagow – <i>existing baseline</i>	Worst-case Moderate/minor (not significant)	Adverse		Worst-case Moderate/minor (not significant)	Adverse
Lesmahagow – <i>future baseline</i>	Worst-case Moderate/minor (not significant)	Adverse		Worst-case Moderate/minor (not significant)	Adverse
Muirkirk – <i>existing baseline</i>	Worst-case Moderate/minor (not significant)	Adverse		Worst-case Moderate/minor (not significant)	Adverse
Muirkirk – <i>future baseline</i>	Worst-case Moderate/minor (not significant)	Adverse		Worst-case Moderate/minor (not significant)	Adverse
Visual Effects of Turbine Lighting (2000 candela) – Road Users					
M74 – <i>existing baseline</i>	Worst-case Moderate (not significant)	Adverse	The LVIA Lighting Assessment (Appendix 6.4) assesses potential effects of turbine lighting based on the worst-case scenario of 2000 candela lighting operating at full intensity and no reduction in directional intensity. In reality, the embedded mitigation built into the scheme would mean that in good visibility conditions these effects	Worst-case Moderate (not significant)	Adverse
M74 – <i>future baseline</i>	Worst-case Moderate/minor (not significant)	Adverse		Worst-case Moderate/minor (not significant)	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Minor road network to the north-east of the site – <i>existing baseline</i>	Worst-case Major/moderate (up to 4km) (significant)	Adverse	would be reduced when the 2000 candela lighting is operating at a reduced intensity and the directional intensity mitigation would reduce effects in all conditions.	Worst-case Major/moderate (up to 4km) (significant)	Adverse
Minor road network to the north-east of the site – <i>future baseline</i>	Worst-case Moderate (up to 4km) (significant)	Adverse		Worst-case Moderate (up to 4km) (significant)	Adverse
Ecology and Nature Conservation					
Collision Risk (<i>Nyctalus</i> bats).	Moderate	Adverse	Set-back of turbines from forestry, Bat Mitigation and Monitoring Plan.	Minor	Adverse
Collision Risk (<i>Pipistrelle</i> bats).	Minor	Adverse	Set-back of turbines from forestry, Bat Mitigation and Monitoring Plan	Minor	Adverse
Ornithology					
Displacement					
Hen harrier	Minor (Not significant)	Adverse	None required. HMP would provide enhanced habitat.	Not significant	Adverse
Merlin	Minor (Not significant)	Adverse		Not significant	Adverse
Goshawk	Negligible (Not significant)	Adverse		Not significant	Adverse
Black grouse	Minor (Not significant)	Adverse		Not significant	Adverse
Curlew	Minor (Not significant)	Adverse		Not significant	Adverse
Golden plover	Minor (Not significant)	Adverse		Not significant	Adverse
Collision Risk					

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Hen harrier	Minor (Not significant)	Adverse	None required.	Not significant	Adverse
Merlin	Minor (Not significant)	Adverse		Not significant	Adverse
Goshawk	Minor (Not significant)	Adverse		Not significant	Adverse
Black grouse	Negligible (Not significant)	Adverse		Not significant	Adverse
Curlew	Minor (Not significant)	Adverse		Not significant	Adverse
Golden plover	Minor (Not significant)	Adverse		Not significant	Adverse
Lighting Effects					
All Important Ornithological Features (IOFs).	Negligible (Not significant)	Adverse	None required.	Not significant	Adverse
Noise and Vibration					
Operational noise from Proposed Development.	Not Significant	Adverse	Operational monitoring to ensure compliance, with the option of selective constraint of turbine operation if found to be a requirement.	Not Significant	Adverse
Cultural Heritage					
Effect on the settings of Dungavel Hill, Cairn (SM2848), Cairn Table, two cairns (SM4631) and Black Hill, fort & cairn (SM2882).	Minor	Adverse	No mitigation necessary.	Minor	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Effect on the setting of New Lanark World Heritage Site.	Minor	Adverse	No mitigation necessary.	Minor	Adverse
Effect on the setting of Falls of Clyde Garden and Designed Landscape (GDL00358).	Minor	Adverse	No mitigation necessary.	Minor	Adverse
Effects on settings of other designated heritage assets in the wider landscape during operation.	Minor / Negligible	Adverse	No mitigation necessary.	Minor / Negligible	Adverse
Hydrology, Hydrogeology and Geology					
Surface water drainage including downstream flood risk.	Major	Adverse	50 m buffer around watercourses wherever possible. Detailed Drainage Strategy to be developed and agreed with SEPA and SLC. To detail drainage design to slow surface water flows and ensure that run-off from hard surfaces will be controlled. Appropriate design of water crossings to maintain continuous flows.	Minor	Adverse
Alteration to fluvial geomorphology.	Moderate	Adverse	Appropriately designed drainage and watercourse crossings.	Minor	Adverse
Transport and Traffic					
Severance, pedestrian delay, pedestrian amenity, fear &	Negligible	Adverse	No mitigation proposed.	Negligible	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
intimidation, driver delay or accidents.					
Socio-economics, Recreation and Tourism					
Annual economic impact of £0.7 million GVA and 10 jobs in South Lanarkshire.	Negligible	Beneficial	N/A	Negligible	Beneficial
Annual economic impact of £1.2 million GVA and 18 jobs in Scotland.	Negligible	Beneficial	N/A	Negligible	Beneficial
Potential revenue from shared ownership.	Moderate	Beneficial	N/A	Moderate	Beneficial
Payment of an estimated £1.3 million in Non-Domestic Rates.	Negligible	Beneficial	N/A	Negligible	Beneficial
Effect on tourism assets.	Negligible	Beneficial	N/A	Negligible	Beneficial
Effect on tourism accommodation providers.	Negligible	Adverse	N/A	Negligible	Adverse
Effect on tourism routes.	Negligible	Adverse	N/A	Negligible	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Effects of proposed investment in tourism infrastructure.	Negligible	Adverse	N/A	Negligible	Adverse
Effect of proposed investment in path network.	Moderate	Beneficial	N/A	Moderate	Beneficial
Aviation, Radar and Telecommunications					
Effects on MoD low flying interests during the operational period.	Negligible	Neutral	Aviation lighting will be installed. The location of erected turbines will be notified to the CAA and Defence Geographic Centre for inclusion in relevant obstacles data bases and the ENR5.4.	Negligible	Neutral
Effects on NATS infrastructure during the operational period.	Major	Adverse	Mitigation measure to be agreed between the Applicant and NATS.	Negligible	Neutral
Effects on Glasgow Airport infrastructure during the operational period.	Major	Adverse	Mitigation measure a to be greed between the Applicant and Glasgow Airport.	Negligible	Neutral
Effects on telecommunications fixed links.	Negligible	Neutral	Further consultation undertaken with Atkins.	Negligible	Neutral
Shadow Flicker					
Shadow flicker effects on residential receptors 1 & 10.	Significant	Adverse	Implementation of a Wind Farm Shadow Flicker Protocol if complaints from residents are received and shadow flicker effects are found to be causing nuisance in certain	Not Significant	N/A

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
			atmospheric conditions and at certain times of the year, to be agreed with South Lanarkshire Council.		
Forestry					
No impacts on forestry during operation.					

Table 19.3 – Cumulative Effects

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Landscape and Visual					
Combined Landscape Character Effects.	Significant effects on much of the rolling moorland landscape (LCTs 7, 7A and 7B) in the vicinity of the site. However, this effect would occur in the absence of the Proposed Development and so, the Proposed Development would consolidate this existing effect brought about by other schemes.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Significant effects on much of the rolling moorland landscape (LCTs 7, 7A and 7B) in the vicinity of the site. However, this effect would occur in the absence of the Proposed Development and so, the Proposed Development would consolidate this existing effect brought about by other schemes.	Adverse
Combined Cumulative Visual Effects.	The Proposed Development would not introduce any additional significant effects and would consolidate the existing effects of the other existing, consented and in planning schemes.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Judgements would remain unchanged. No additional significant effects resulting from the addition of the Proposed Development.	Adverse
Ecology and Nature Conservation					
Habitat loss (Blanket bog and wet modified bog).	Negligible	Adverse	None required.	Negligible	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Habitat loss and disturbance (<i>Nyctalus</i> bats).	Minor	Adverse	None required.	Minor	Adverse
Habitat loss and disturbance (<i>Pipistrelle</i> bats).	Negligible	Adverse	None required.	Negligible	Adverse
Collision Risk (<i>Nyctalus</i> bats).	Minor	Adverse	None required.	Minor	Adverse
Collision Risk (<i>Pipistrelle</i> bats).	Minor	Adverse	None required.	Minor	Adverse
Ornithology					
All IOFs.	Minor (Not significant)	Adverse	None required.	Not significant	Adverse
Noise and Vibration					
Cumulative noise from the operation of consented and proposed local wind energy developments.	Not Significant	Adverse	Operational monitoring to ensure compliance, with the option of selective constraint for the Proposed Development if found necessary.	Not Significant	Adverse
Cultural Heritage					
Cumulative effect on the settings of Dungavel Hill, Cairn (SM2848), Cairn Table, two cairns (SM4631) and Black Hill, fort & cairn (SM2882).	Minor	Adverse	No mitigation necessary.	Minor	Adverse
Cumulative effect on the setting of New Lanark World Heritage Site.	Minor	Adverse	No mitigation necessary.	Minor	Adverse

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Cumulative effect on the setting of Falls of Clyde Garden and Designed Landscape (GDL00358).	Minor	Adverse	No mitigation necessary.	Minor	Adverse
Cumulative effect on the setting of other designated heritage assets in the wider landscape.	Minor	Adverse	No mitigation necessary.	Negligible	Adverse
Hydrology, Hydrogeology and Geology					
Impacts on River Nethan.	Minor	Adverse	No additional mitigation necessary.	Minor	Adverse
Transport and Traffic					
Severance, pedestrian delay, pedestrian amenity, fear & intimidation, driver delay or accidents.	Negligible	Adverse	None proposed beyond employment of good practice measures.	Negligible	Adverse
Socio-economics, Recreation and Tourism					
Development of a significant local renewable energy supply chain.	Minor	Beneficial	No mitigation necessary.	Minor	Beneficial
Enable community to secure more funding and investment into the area	Minor	Beneficial	No mitigation necessary.	Minor	Beneficial
Aviation, Radar and Telecommunication					

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
It is considered that there will be no significant cumulative effects on aviation, radar or telecommunication interests as a result of the Proposed Development					
Shadow Flicker					
Cumulative shadow flicker effects on receptor 2 with Auchrobert wind farm.	Negligible	Adverse	Implementation of a Wind Farm Shadow Flicker Protocol if complaints from residents are received and shadow flicker effects are found to be causing nuisance in certain atmospheric conditions and at certain times of the year, to be agreed with South Lanarkshire Council.	Not Significant	N/A
Forestry					
Potential cumulative reduction of 8.4% of Cumberhead Forest area.	Minor	Adverse	Delivery of Compensatory Planting and Implementation of Wind Farm Forest Plan.	Neutral	N/A

