Chapter 16 Summary of Residual Effects

Contents

16. Summary of Residual Effects 3
16.1. Introduction 3
Table 16.1 – Summary of Construction and Decommissioning Effects 4
Table 16.2 – Summary of Operational Phase Effects 9
Table 16.3 – Summary of Cumulative Effects 12
Table 16.4 – Summary of Effects Identified in the LVIA 14

List of Abbreviations

Abbreviation	Description
AIL	Abnormal Indivisible Loads
BDMP	Bird Disturbance Management Plan
BEMP	Biodiversity Enhancement Management Plan
CAR	Controlled Activities (Scotland) Regulations
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic management Plan
DPMP	Draft Peat Management Plan
DS	Drainage Strategy
EIA	Environmental Impact Assessment
GVA	Gross Value Added
HA	Heritage Asset
LCT	Landscape Character Type
PWS	Private Water Supply
SEPA	Scottish Environmental Protection Agency
SLA	Special Landscape Area

SM	Scheduled Monument
THC	The Highland Council
WLA	Wild Land Area
WSI	Written Scheme of Investigation
WQMP	Water Quality Management Plan

16. Summary of Residual Effects

16.1. Introduction

16.1.1. **Table 16.1** and **16.2** provide a reference to any 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.

16.1.2. The residual effects are highlighted in **bold** where an effect is considered to be significant.

16.1.3. **Table 16.3** provides a summary of the cumulative effects of the Proposed Development in combination with other proposed, consented and operational developments within the local area.

16.1.4. **Table 16.4** provides a summary of the residual effects and cumulative effects identified in the Landscape and Visual Assessment (LVIA) in **Chapter 6** of the EIA Report.

Table 16.1 – Summary of Construction and Decommissioning Effects

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/Adverse		Significance	Beneficial/Adverse
Ornithology					
Displacement of black grouse	**Moderate / Potentially Significant**	**Adverse**	Specific targeted pre-construction surveys for black grouse to identify up to date lek areas within 750 m of construction activity immediately prior to construction commencing. Extension of the BDMP to include protection of lek sites and specific construction control measures to minimise lek disturbance for any leks within 750 m of the Proposed Development.	Minor / Not significant	Adverse
Displacement of golden eagle and golden plover	Minor / Not significant	Adverse	No mitigation prescribed	Minor / Not significant	Adverse
Ecology					
Direct and indirect habitat loss of blanket bog and wet modified bog (combined loss due to permanent and temporary works total 24.65 ha)	Not significant	Adverse	In addition to embedded mitigation, compensation would be delivered through a BEMP which includes bog and upland habitat restoration (**Appendix 8.6**).	Not significant and adverse in the short term. Potentially changing to a **Significant Beneficial** effect in the long-term through restoration/ enhancement of bog habitats as	Adverse in short-term, potentially becoming **Beneficial** in the long-term

				implemented by the BEMP.	
Direct habitat loss of ancient woodland habitat (approximately 0.19 ha)	Not significant	Adverse	In addition to embedded mitigation, compensation would be delivered through natural woodland regeneration (as detailed in **Appendix 3.3**)	Not significant	Adverse
Hydrology, Geology & Hydrogeology					
Impact on Surface Water Quality	Minor / Not Significant	Adverse	Embedded design and good practice mitigation: Minimum 50 m buffer from watercourses. • Use of existing infrastructure as far as practicable. • Siting infrastructure to minimise peat excavation requirements. • Implementation of mitigation measures in CEMP. • Drainage Strategy (DS) to be implemented. • Final design of watercourse crossings to be implemented. • Dewatering undertaken for as short a time as practicable. • Pre-construction ground investigation works. Water quality monitoring and management plan to be agreed and implemented.	Minor / Not Significant	Adverse
Impact on Surface Water Flow	Minor / Not Significant	Adverse		Minor / Not Significant	Adverse
Impact on Groundwater Quality	Minor / Not Significant	Adverse		Minor / Not Significant	Adverse
Impact on Groundwater Flow	Minor / Not Significant	Adverse		Minor / Not Significant	Adverse
Compaction of Soils	Negligible / Not Significant	Adverse		Negligible / Not Significant	Adverse
Impacts to Designated Sites (Glen Tarff SSSI and Ness Woods SAC)	Minor / Not Significant	Adverse		Minor / Not Significant	Adverse
Impacts to Public Water Supplies (River Tarff DWPA)	Minor / Not Significant	Adverse		Minor / Not Significant	Adverse
Impacts to Private Water Supplies (PWS Culachy Estate)	Minor / Not Significant	Adverse		Minor / Not Significant	Adverse
Impacts to Private Water Supplies (PWS Ard Aluinn)	**Moderate / Significant**	**Adverse**		Minor / Not Significant	Adverse

Removal and Impact on Peat	Minor / Not Significant	Adverse	Embedded design and good practice mitigation, including peat management, storage and restoration in line with the DPMP.	Minor / Not Significant	Adverse
Peat Landslide Impact on Watercourses	Minor / Not Significant	Adverse	Embedded and good practice mitigation, including measures noted above and avoidance of potential peat landslide risk areas in design. Management, storage and restoration in line with the DPMP.	Minor / Not Significant	Adverse
Cultural Heritage					
Direct (physical) construction phase impact: MHG22966, Knollbuck Farmstead	Negligible / Not Significant	Adverse	The asset will be subject to a programme of pre-construction photographic recording and topographic survey of any upstanding features which may relate to the asset. A watching brief of ground breaking works in this area is also proposed. The scope and nature of the works will be outlined in a WSI and agreed with THC in advance of construction	None	N/A
Micrositing/accidental direct (physical) construction phase impacts: • MHG25625, a bridge • MHG38102, site of a cottage • MHG62470, site of an earthwork bank and cairn • MHG56470, a dyke • MHG56466, a clearance cairn	Minor / Not Significant	Adverse	All assets (with the exception of MHG62470) will be demarcated and fenced off prior to the commencement of the Construction Phase. The location of all assets, including MHG62470, will be shown on a map and communicated to the onsite contractors as part of a Cultural Heritage toolbox talk with the requirement to avoid uncontrolled plant movements or spoil storage etc in the area during construction.	None	N/A

• MHG22966, Knollbuck Farmstead • MHG62472, a sheep wash					
Direct (physical) construction phase impact on archaeological potential	Minor / Not Significant	Adverse	Archaeological monitoring of ground breaking works within areas of archaeological potential will be carried out. The scope and nature of the works will be outlined in a WSI and agreed with THC in advance of construction.	None	N/A
Noise and Vibration					
Noise and Vibration effects	No Effect	N/A	None Required	No Effect	N/A
Traffic & Transport					
Construction Impact: Users of U1667 Ardachy Road	**Moderate / Significant**	**Adverse**	Implementation of Construction Traffic Management Plan (CTMP), provision of construction traffic road signage, convoy escorts for AIL movements, provision of localised road improvement works.	Minor / Not Significant	Neutral
Construction Impact: Core Path / Public Right of Way Users	**Moderate / Significant**	**Adverse**	Implementation of CTMP including adoption of a voluntary speed limit of 15 mph for all construction vehicles on the U1667 Ardachy Road in the vicinity of the Core Paths, provision of construction traffic road signage, convoy escorts for AIL movements, provision of localised road improvement works. Provision of an on-site Path Management Plan.	Minor / Not Significant	Neutral
Any decommissioning effects would be less that those predicted for the construction phase.					

Socio-Economics Tourism & Recreation					
Construction: £10.8 million GVA and 155 job years in Highland	Minor / Not Significant	Beneficial	n/a	Minor / Not Significant	Beneficial
Construction: £17.8 million GVA and 260 job years in Scotland	Negligible / Not Significant	Beneficial	n/a	Negligible / Not Significant	Beneficial
Construction: £32.6 million GVA and 475 jobs in the UK	Negligible / Not Significant	Beneficial	n/a	Negligible / Not Significant	Beneficial
Aviation					
There are no anticipated effects.					

Table 16.2 – Summary of Operational Phase Effects

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/Adverse		Significance	Beneficial/Adverse
Ornithology					
Displacement of black grouse, golden eagle and golden plover	Minor / Not significant	Adverse	No mitigation prescribed	Minor / Not significant	Adverse
Golden eagle collision risk	Minor / Not significant	Adverse	No mitigation prescribed	Minor / Not significant	Adverse
Turbine lighting: black grouse, golden eagle, and golden plover	Negligible / Not significant	N/A	No mitigation prescribed	Negligible / Not significant	N/A
Ecology					
No operational effects on scoped-in IEFs are predicted. All likely direct and indirect effects on habitats have been considered in the Construction Effects.					
Hydrology, Geology & Hydrogeology					
Impacts on Surface Water Flow	Minor / Not Significant	Adverse	Embedded design and good practice mitigation. Implementation of a Drainage Strategy (DS), to include trackside and cross drainage.	Minor / Not Significant	Adverse
Impacts on Fluvial Geomorphology	Minor / Not Significant	Adverse	Embedded design and good practice mitigation. Regulation of watercourse crossings by CAR, to include maintenance and removing any blockages.	Minor / Not Significant	Adverse

Impacts on Groundwater Flow and Drying out of Peat	Minor / Not Significant	Adverse	Embedded design and good practice mitigation. Implementation of a Drainage Strategy, to include trackside and cross drainage. Enhancement via delivery of BEMP to restore 424.63ha habitat.	Minor / Not Significant	Adverse
Impacts on Surface Water and Groundwater quality from Chemical Pollution and Sedimentation	Minor / Not Significant	Adverse	Embedded design and good practice mitigation. Implement best practice and correct storage of fuels and management plans in the event of spills.	Minor / Not Significant	Adverse
Cultural Heritage					
Direct (physical) operational phase impact: HA 9 (non-designated section of the Corrieyairack Pass, Military Road)	Negligible / Not Significant	Adverse	Signage and chicane will be located adjacent to HA9 and not on the asset itself.	None	N/A
Operational phase impacts on the setting of SM6140, SM6141 and SM6142,	Minor / Not Significant	Adverse	None	Minor / Not Significant	Adverse
Operational phase impacts on the setting of SM6143 and SM6128	Negligible / Not Significant	Adverse	None	Negligible / Not Significant	Adverse
Noise and Vibration					
Noise and Vibration effects	No effect	N/A	None Required	No Effect	N/A
Traffic & Transport					
No operational effects anticipated.					

Socio-Economics					
£0.4 million GVA and 5 jobs in Highland	Negligible / Not Significant	Beneficial	n/a	Negligible / Not Significant	Beneficial
£1.6 million GVA and 15 jobs in Scotland	Negligible / Not Significant	Beneficial	n/a	Negligible / Not Significant	Beneficial
£2.3 million GVA and 25 jobs in the UK	Negligible / Not Significant	Beneficial	n/a	Negligible / Not Significant	Beneficial
£288,000 annual community benefit payments	Negligible / Not Significant	Beneficial	n/a	Negligible / Not Significant	Beneficial
Payment of non-domestic rates	Negligible / Not Significant	Beneficial	n/a	Negligible / Not Significant	Beneficial
Effect on local tourism economy	Negligible / Not Significant	n/a	n/a	Negligible / Not Significant	n/a
Aviation					
There are no anticipated residual effects upon aviation.					

Table 16.3 – Summary of Cumulative Effects

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/Adverse		Significance	Beneficial/Adverse
Ornithology					
Cumulative effects on golden eagle	Minor / Not significant	Adverse	No mitigation prescribed	Minor / Not significant	Adverse
Ecology					
No cumulative effects anticipated.					
Hydrology, Geology & Hydrogeology					
No cumulative effects anticipated.					
Cultural Heritage					
No cumulative effects anticipated.					
Noise & Vibration					
Other wind farm developments	No effect	N/A	None Required	No Effect	N/A
The Beauly Denny Line	No effect	N/A	None Required	No Effect	N/A
Traffic & Transport					
No cumulative effects anticipated					
Socio-Economics					
No significant cumulative effects on tourism and recreation anticipated					

Aviation
There are no anticipated cumulative effects upon aviation.

Table 16.4 – Summary of Effects Identified in the LVIA

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Scenario		Application Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect
Physical Landscape Effects							
Moorland	Medium	Low	Minor / Not Significant	N/A	N/A	N/A	N/A
Landscape Character Effects							
LCT 236, Smooth Moorland Ridges	Medium-High	High: localised within 3.5 km	**Major / Significant**	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant
		Medium: within 5 km	**Moderate / Significant**	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant
		Low: other areas	Minor / Not Significant	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant
LCT 221, Rolling Uplands - Inverness	Medium	High: localised (4 km north-east, 2 km north-west, 3 km south-east.)	**Moderate-Major / Significant**	High: localised (4 km north-east, 2 km north-west, 3 km south-east.)	**Moderate-Major / Significant**	High: localised (4 km north-east, 2 km north-west, 3 km south-east.)	**Moderate-Major / Significant**
		Low: other areas	Minor / Not Significant	Low: other areas	Minor / Not Significant	Medium-Low: other areas	Moderate-Minor / Not Significant
LCT 239, Interlocking Sweeping Peaks - Lochaber	Medium-High	Medium-Low	Moderate / Not Significant	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Scenario		Application Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect
LCT 235, Broad Forested Strath	Medium	Low	Minor / Not Significant	Low	Minor / Not Significant	Medium-Low	Moderate – Minor / Not Significant
LCT 237, Rocky Moorland - Lochaber	Medium	Low	Minor / Not Significant	Low	Minor / Not Significant	Medium-Low	Moderate – Minor / Not Significant
LCT 220, Rugged Massif - Inverness	Medium	Medium-Low	Moderate – Minor / Not Significant	Medium-Low	Moderate – Minor / Not Significant	Low	Minor / Not Significant
LCT 225, Broad Steep-Sided Glen	Medium-High	Medium-Low	Moderate / Not Significant	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant
LCT 224, Farmed and Wooded Foothills	Medium-High	Low	Moderate – Minor / Not Significant	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant
Landscape Designations							
WLA 19: Braeroy - Glenshirra - Creag Meagaidh	Medium-Low	High- localised within 3.5 km	**Moderate / Significant**	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant
		Medium – other parts of the WLA study area	Moderate – Minor / Not Significant	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant
Loch Lochy and Loch Oich SLA	Medium-High	Medium-Low	Moderate / Not Significant	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Scenario		Application Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect
Loch Ness and Duntelchaig SLA	High	Medium-Low	Moderate / Not Significant	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant
Visual Effects							
Viewpoint 1 - Corrieyairack Pass	High	High	**Major / Significant**	High	**Major / Significant**	High	**Major / Significant**
Viewpoint 2 General Wade's Military Road	High	High	**Major / Significant**	No Change	No Effect	No Change	No Effect
Viewpoint 3 Corrieyairack Hill	Medium-High	Medium-High	**Moderate-Major / Significant**	Medium-High	**Moderate-Major / Significant**	High	**Major / Significant**
Viewpoint 4 Carn a' Chuilinn	Medium-High	Medium-High	**Moderate-Major / Significant**	Medium-High	**Moderate-Major / Significant**	High	**Major / Significant**
Viewpoint 5 Carn Dearg	Medium-High	Medium	**Moderate / Significant**	Medium	**Moderate / Significant**	Medium	**Moderate / Significant**
Viewpoint 6 Fort Augustus, Car Park Adjacent to A82	High (Residential)	Negligible	Moderate-Minor / Not Significant	No Change	No Effect	No Change	No Effect
	Medium (road users)	Negligible	Minor / Not Significant	No Change	No Effect	No Change	No Effect
Viewpoint 7 Fort Augustus near Church Road	High	Negligible	Minor / Not Significant	No Change	No Effect	No Change	No Effect

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Scenario		Application Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect
Viewpoint 8 Loch Lundie	Medium	Medium-Low	Moderate-Minor / Not Significant	No Change	No Effect	No Change	No Effect
Viewpoint 9 A82 North of Fort Augustus	Medium	Negligible	Minor / Not Significant	No Change	No Effect	No Change	No Effect
Viewpoint 10 An Suidhe	High	Low	Moderate-Minor / Not Significant	Low	Moderate-Minor / Not Significant	Low	Moderate-Minor / Not Significant
Viewpoint 11 Great Glen Way, Carn an Doire Mhoir	High	Medium-Low	Moderate / Not Significant	No Change	No Effect	No Change	No Effect
Viewpoint 12 B862 An Suidhe Car Park	Medium-High	Low	Moderate-Minor / Not Significant	Low	Moderate-Minor / Not Significant	Low	Moderate-Minor / Not Significant
Viewpoint 13 Burach	Medium-High	Medium-Low	Moderate / Not Significant	Medium	**Moderate / Significant**	Medium	**Moderate / Significant**
Viewpoint 14 Ben Tee	Medium-High	Medium-Low	Moderate / Not Significant	Medium-Low	Moderate / Not Significant	Medium-Low	Moderate / Not Significant
Viewpoint 15 Meall Dubh	Medium	Low	Minor / Not Significant	Low	Minor / Not Significant	Low	Minor / Not Significant
Viewpoint 16 A87, Loch Garry	Medium (road users)	Medium-Low	Moderate-Minor / Not Significant	No Change	No Effect	Negligible	Minor / Not Significant
	Medium-High (visitors)	Negligible	Minor / Not Significant	No Change	No Effect	Negligible	Minor / Not Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Scenario		Application Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect	Cumulative Magnitude of Change	Significance of Cumulative Effect
Viewpoint 17 Meall Fuar-mhonaidh	High	Low	Moderate-Minor / Not Significant	Medium-Low	Moderate / Not Significant	Medium-Low	Moderate / Not Significant
Viewpoint 18 Toll Creagach	Medium-High	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant	Negligible	Minor / Not Significant
Viewpoint 20 Meallan Odhar	Medium-High	High	**Major / Significant**	High	**Major / Significant**	High	**Major / Significant**
Viewpoint 21 Beauly-Denny track	Medium-High	High	**Major/ Significant**	No Change	No Effect	No Change	No Effect
A87, sequential assessment	Medium	Medium-Low	Moderate-Minor / Not Significant	No Change	No Effect	Medium	Moderate / Not Significant