Fosse Green Energy

EN010154

6.3 Environmental Statement Appendices

Appendix 6-C: In-Combination Climate Change Impact Assessment

Planning Act 2008 (as amended)

Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

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Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulation 2009 (as amended)

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Development Consent Order 202[ ]

6.3 Environmental Statement Appendices

Appendix 6-C: In-Combination Climate Change Impact Assessment

Regulation Reference	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	EN010154
Application Document Reference	EN010154/APP/6.3
Author	Fosse Green Energy Limited

Version	Date	Issue Purpose
Rev 1	18 July 2025	DCO Submission

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1. Introduction

1.1 Purpose of the Appendix

This appendix to **Chapter 6: Climate Change** of the Environmental Statement (ES) **[EN010154/APP/6.1]** identifies and describes the results of an In-combination Climate Change Impact (ICCI) assessment, as undertaken by each technical discipline lead with support from the climate chapter team.

Table 1: ICCI Assessment Results

Discipline/ Receptor	Climate Hazard	Likelihood of Climate Hazard Occurring	Likely ICCIs Identified	Description of ICCI considering embedded environment measures/good practice	Likelihood of ICCI occurring	Consequence of ICCI	Significance
Cultural Heritage	**No ICCIs identified – climate hazards would not alter the significance of identified effects upon the cultural heritage resource, already reported in Chapter 7: Cultural Heritage [EN010154/APP/6.1] of the ES or necessitate additional mitigation measures.**						
Ecology and Nature Conservation	**Increased drought periods in the summer**	**Possible**	**Construction: Increased sedimentation / pollution impacting the surrounding environment during construction / decommissioning due to lower flows** **Operation: no likely ICCIs identified.** **Decommissioning: Increased sedimentation / pollution impacting the surrounding environment decommissioning due to lower flows**	**During construction and decommissioning phases, extended dry spells in combination with warmer air temperatures and an increased risk of degraded water quality from construction and decommissioning activities may cause an increased risk of mortality to aquatic organisms such as fish. Minimised through embedded mitigation such as pollution control measures to reduce the impacts.**	**Unlikely**	**Very Low**	**Not Significant**
Water Environment	Increase in winter precipitation rate	Possible	Construction: Increased stress on drainage system due to increased rainfall, which could lead to capacity of drainage infrastructure being exceeded, with potential to have flood consequences and for pollutants to be discharged without treatment. Operation: as above. Decommissioning: no likely ICCIs identified.	**Appendix 9-D: Surface Water Drainage Strategy [EN010154/APP/6.3]** of this ES outlines that the new drainage system for the impermeable areas has been designed to accommodate the 1 in 100-year storm, plus a 40% allowance for an increase in peak rainfall intensity. There are also measures such as swales and penstocks to prevent pollution from entering the ground and local watercourses.	Low	Low	Not Significant
	Increase in winter precipitation rate	Possible	Construction: Groundwater levels may rise closer to the ground surface / mixing with potential pre-existing shallower contamination from construction activities (within Made Ground) which would otherwise not be encountered. This would increase the likelihood of potential impact on groundwater quality. Operation: as above for operation activities. Decommissioning: no likely ICCIs identified.	Contamination which may be encountered during construction will have been removed, remediated or mitigated as outlined in **Appendix 9-C Flood Risk Assessment [EN010154/APP/6.2]** of the ES. The **Framework Construction Environmental Management Plan (CEMP) [EN010154/APP/7.7]** also lists mitigation measures like implementing containment measures, producing an emergency spillage action plan, and investigation of any potential 'hotspots' of contamination. Maintenance and operation of the Proposed Development will be in accordance with environmental legislation and good practice. Therefore, it is unlikely that there will be an increased risk to groundwater quality should levels rise towards Made Ground.	Low	Low	Not Significant
	Decrease in summer	Possible	Operation: More regular cleaning of panels from dust build-up	Standard 2-yearly panel cleaning is assumed, with no cleaning products used and requirement of 250ml	Low	Low	Not Significant

	precipitation rate		during extended dry periods, further reducing water availability for the surrounding environment in periods of low precipitation.	(millilitres) of water per panel, as outlined in the **Framework Operation Environmental Management Plan [EN010154/APP/7.8]**. Any additional cleaning would be irregular and infrequent, with negligible amounts of water used.			
Landscape and Visual Amenity	**No ICCIs identified – climate hazards would not alter the significance of the landscape and visual impacts already reported in Chapter 10: Landscape and Visual Amenity [EN010154/APP/6.1] of the ES.**						
Noise and Vibration	**Increase in occurrence of heatwaves**	**Likely**	**Construction: Potential to exacerbate noise effects on communities in terms of individual dwellings and on a wider community during the construction period, due to windows being open more often due to an increase in high temperatures.** **Operation: no likely ICCIs identified.** **Decommissioning: no likely ICCIs identified.**	**The noise assessment criteria assume windows are open and closing windows is a form of mitigation against noise. Consequently, there is no further impact on noise effects arising from the ICCI.**	**Negligible**	**Negligible**	**Not Significant**
	Increase in mean temperature and humidity	Likely	Construction: no likely ICCIs identified. Operation: Increases in temperature and humidity of the air reducing the atmospheric attenuation of noise. Decommissioning: no likely ICCIs identified.	Over distances of a few hundred metres, which covers the noise study area, atmospheric effects can be ignored. Consequently, increases in temperature and humidity is unlikely to affect noise sources during the construction phase and operational phase.	Negligible	Negligible	Not Significant
Socio-Economics and Land Use	Increased precipitation	Possible	Construction: Increased soil erosion due to higher rainfall and Proposed Development structures and materials. Operation: as above. Decommissioning: no likely ICCIs identified.	Permanent vegetation cover of soil during operation of the Principal Site will help protect the soil surface and increase permeability and soil pore water storage to mitigate effects of increased precipitation. Further details can be found in the **Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]** and **Design Approach Document (Appendix A: Design Commitments) [EN010154/APP/7.3].**	Negligible	Low	Not Significant
Traffic and Transport	**No ICCIs identified – climate hazards would not alter the significance of identified effects upon Traffic and Transport, as already reported in Chapter 13: Traffic and Transport [EN010154/APP/6.1] of the ES, or necessitate additional mitigation measures.**						
Other Environmental Topics - Air Quality	**Increased number of dry days**	**Possible**	**Construction: Increased potential for dust production due to extended dry spells.** **Operation: no likely ICCIs identified.** **Decommissioning: no likely ICCIs identified.**	**During the construction phase, extended dry spells may increase the need for mitigation to avoid increased dust production. This consequence would be minimised as far as reasonably practicable, through the measures required by the Framework CEMP [EN010154/APP/7.7] (e.g. reduce dust emissions through the effective transportation and storage of materials), including the proposed monitoring regime.**	**Low**	**Very low**	**Not Significant**

Other Environmental Topics - Waste	**No ICCIs have been identified for waste. The materials and waste assessment receptors are waste management infrastructure (specifically landfill capacity) and national and regional construction material demand. It is considered that impacts arising from an increase in demand and climate change on the operation of waste management infrastructure and manufacturing of materials have been taken into account as part of the planning and permitting process for such facilities.**
Ground Conditions and Contaminated Land	No ICCIs identified. The Proposed Development area currently consists of predominantly soft ground and will remain as such throughout the Proposed Development's expected lifecycle. Control measures are outlined in the **Framework Landscape and Ecological Management Plan [EN010154/APP/7.15].**