

# 8 Noise

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# 8 Noise

## 8.1 Executive Summary

- 8.1.1 Potential differences to the noise impacts associated with the Proposed Development arising from the change from the 2020 Layout to the 2021 Layout have been qualitatively evaluated. It supersedes the findings of the 2020 SEI and the 2019 EIA Report to the extent specified.
- 8.1.2 Noise impacts during the construction and operational phases will be similar to, but less than, noise previously identified, due to the smaller number of turbines and lesser amount of associated infrastructure. Vibration impacts were scoped out of the 2019 EIA Report and remain scoped out of this SEI 2. Noise impacts remain not significant, and no mitigation is proposed. Cumulative noise impacts remain not significant.

## 8.2 Introduction

- 8.2.1 This chapter considers the potential operational noise impacts associated with the 2021 Layout of the Proposed Development and supersedes the findings of the 2020 SEI (which assessed the 2020 Layout) and the 2019 EIA Report (which assessed the 2019 Layout) to the extent specified.
- 8.2.2 The chapter considers operational noise only; all other aspects have been assumed to be the same as those considered in the 2019 EIA Report. Noise from construction activities will be similar to that previously assessed in the 2019 EIA Report, albeit of marginally lower magnitude and shorter duration given the smaller number of turbines in the 2021 Layout.
- 8.2.3 The 2021 Layout incorporates five fewer turbines and an associated reduction to infrastructure compared with the 2020 SEI, which in turn considered a reduction in turbine number and lower tip heights compared with the 2019 EIA Report.
- 8.2.4 The noise chapter (Chapter 8) of the 2019 EIA Report is supported by Appendix 8.1 which contains a glossary of terminology, which may assist the reader in their interpretation of the SEI 2.

### ***Scope of Assessment***

- 8.2.5 The 2021 Layout comprises fewer turbines and less supporting infrastructure than both the 2020 Layout and the 2019 Layout. The turbines which are no longer included in the design are those furthest from noise-sensitive receptors (NSRs). No other changes to the design which may affect the findings of the noise assessment (e.g., turbine hub height) are proposed, therefore noise impacts will be similar to, but lesser than, those evaluated in the 2020 SEI and the 2019 EIA Report. This SEI 2 has therefore not included any update to predicted construction or operational noise levels and provides a qualitative evaluation of potential impacts.

## 8.3 Response to Consultation Responses

- 8.3.1 No supplementary consultation has been undertaken as part of this chapter. SIC accepted the method of assessment for the 2019 EIA Report, and there has been no change to the agreed method for either the 2020 SEI or SEI 2.

## 8.4 Assessment of Residual Effects

- 8.4.1 Following the change in design of the Proposed Development, a reassessment of the residual effects of the Proposed Development upon the receptors identified in the 2019 EIA Report and 2020 SEI has been undertaken. This assessment assumes that all mitigation detailed within the 2019 EIA Report and 2020 SEI is undertaken.

### ***Operational Phase Noise Levels***

- 8.4.2 The reduced number of turbines included in the 2021 Layout compared to the 2020 Layout and 2019 Layout will result in marginally lower noise levels compared to previously predicted operational noise levels, which have been previously confirmed to meet the proposed noise limits. Similarly, fixed non-turbine plant (i.e. substations and transformers) remain unchanged from the 2019 Layout and 2020 Layout, and therefore no updated assessment of such plant is required. Predicted operational phase effects are therefore the same as those reported in the 2019 EIA Report and 2020 SEI and remain not significant.
- 8.4.3 Residual effects are therefore similar to, or lesser than, those reported in the 2019 EIA Report and the 2020 SEI. No additional mitigation for noise is therefore proposed.

## **8.5 Assessment of Cumulative Effects**

- 8.5.1 Potential cumulative effects are accounted for in the derivation of noise limits in the 2020 SEI. Predicted operational noise levels evaluated in the 2020 SEI met the noise limits, and operational wind turbine noise associated with the 2021 Layout will be lower, therefore the noise limits will be met by a greater margin.
- 8.5.2 Cumulative effects associated with the 2021 Layout remain not significant.

## **8.6 Comparison of Effects**

- 8.6.1 As discussed above, noise levels associated with the operational phase of the Proposed Development will be lower at NSRs, and the resultant noise impacts will be lower and remain not significant in EIA terms.

**Table 8.1 – Summary of Effects**

Description of Effect	2020 SEI Effects		SEI 2 Effects	
	Significance	Beneficial/ Adverse	Significance	Beneficial/ Adverse
Operational phase noise impacts – noise from wind turbines (daytime)	Minor	Adverse	Minor	Adverse
Operational phase noise impacts – noise from wind turbines (night-time)	Minor/Neutral	Adverse	Minor/Neutral	Adverse

**Table 8.2 – Summary of Cumulative Effects**

Receptor	Effect	Cumulative Developments	2020 SEI Cumulative Effect		SEI 2 Cumulative Effect	
			Significance	Beneficial/ Adverse	Significance	Beneficial/ Adverse
All receptors	Operational noise from wind turbines	Garth Wind Farm	Minor/Neutral	Adverse	Minor/Neutral	Adverse

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