

Euchanhead Renewable Energy Development

Additional Environmental Information

Technical Appendix 15.4:

Reduced Aviation Lighting Scheme



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Abbreviations

Additional Environmental Information	AEI
IALLVIMP	Indicative Aviation Lighting Landscape and Visual Impact Mitigation Plan
CAA	Civil Aviation Authority
cd	Candela
Environmental Impact Assessment	EIA
LVIA	Landscape and Visual Impact Assessment
m	metres
Section 36 (of The Electricity Act 1989)	S36
SPR	ScottishPower Renewables
UK	United Kingdom

1. Introduction

This document has been prepared by ScottishPower Renewables (“the Applicant”) and outlines the updates to the Reduced Lighting Scheme mitigation option proposed within **Technical Appendix 15.3: Indicative Aviation Lighting Landscape and Visual Impact Mitigation Plan** (“IALLVIMP”) of the Euchanhead Renewable Energy Development (hereafter, the ‘proposed Development’) EIA Report.

Technical Appendix 15.3 of the EIA Report is not superseded by this document, other than in areas where updates are directly made, i.e. reduced lighting. This document is to be read alongside **Chapter 7: Landscape and Visual Impact Assessment** of the proposed Development Additional Environmental Information (AEI) which takes account of the proposed lighting changes and assesses their impact from a Landscape and Visual perspective.

2. Reduced Aviation Lighting Scheme Update

Following submission of the proposed Development EIA Report as part of the Section 36 (S36) application in October 2020, the Applicant has progressed with designing and seeking approval from the Civil Aviation Authority (CAA) for a reduced aviation lighting scheme. This was initially proposed as a turbine lighting mitigation option within **Technical Appendix 15.3** of the EIA Report.

Following feedback from the Landscape advisors for Dumfries and Galloway Council, the Applicant has reviewed the potential to implement a reduced aviation lighting scheme at the proposed Development and considered the extent to which this could reduce the landscape and visual effects of the lights. Reduced aviation lighting schemes typically consist of cardinal or perimeter turbines being lit and dispensation not to light certain turbines in between. This can substantially reduce the density of turbines being illuminated.

Following design changes to the proposed Development that are detailed within **AEI Chapter 3: Description of Development** a reduced lighting scheme was designed (see Annex 1).

The Applicant subsequently submitted this reduced lighting scheme to the CAA, which was then accepted in July 2025.

The Applicant has gained approval from the CAA to implement a reduced lighting scheme inclusive of:

- medium intensity steady red (2000 candela) lights on the nacelles of 12 of the 19 turbines: Turbines No.1, No.3, No.5, No.6, No.8, No.9, No.11, No.12, No.13, No.17, No.18 and No.19;



- a second 2000 candela light on the nacelles of the above turbines to act as an alternative in case of failure of the main light (note that both lights should not be lit at the same time)
- the lights on these turbines to be capable of being dimmed to 10% of peak intensity when the lowest visibility as measured at suitable points around the wind farm by visibility measuring devices exceeds 5km;
- infra-red lights to Ministry of Defence (MoD) specification installed on the nacelles of turbines No.1, No.3, No.5, No.6, No.8, No.9, No.11, No.12, No.13, No.17, No.18 and No.19. Note that dimming permission is applicable only to visible lights, not infra-red lighting.
- Intermediate level 32 candela lights are not required to be fitted on the turbine towers.

Further to the condition(s) above, the Applicant shall also deploy lights that reduce directional intensity below zero degrees of horizontal to reduce the intensity of light at close proximity ground-based receptors.



Annex 1: Aviation Lighting Figure

