CORR CHNOC WIND FARM

ADDITIONAL INFORMATION REPORT

VOLUME 1: WRITTEN STATEMENT

OCTOBER 2026

Prepared on behalf of

GALILEO EMPOWER

savills

Document title:	Additional Information Report – Volume 1: Written Statement
Project:	Corr Chnoc Wind Farm
Client:	Galileo 04 Ltd
Date:	October 2026

GALILEO EMPOWER

Contents

Chapter 1 Introduction and Purpose of the Additional Information

Chapter 2 Background to the AI Report

Chapter 3 Raeshaw Farms Judgement

Chapter 4 Landscape and Visual Assessment

Chapter 5 Ornithology

Chapter 6 Noise

Chapter 7 Climate Change Impact Assessment

Chapter 8 Summary of Significant Effects

1 Introduction and Purpose of the Additional Information

1.1 Introduction

1.1.1 In November 2024 Galileo 04 Ltd (the Applicant) submitted an application for consent under Section 36 of the Electricity Act 1989 for the proposed Corr Chnoc Wind Farm. The Applicant is also seeking deemed planning permission under Section 57 of the Town and Country Planning (Scotland) Act 1997, as amended.

1.1.2 The application as submitted comprises 12 wind turbines, each up to a maximum blade tip height of 200 metres (m) with associated infrastructure including a 25 MegaWatt (MW) battery energy storage system (BESS). Further details are set out in **Environmental Impact Assessment (EIA) Report, Chapter 4 'Description of Development'** and accompanying **Figures 4.1 - 4.19,** which were submitted with the November 2024 application.

1.1.3 The application remains under consideration, and this Additional Information (AI) Report has been prepared on behalf of the Applicant to provide an updated assessment of the proposed Corr Chnoc Wind Farm to specifically address the following matters:-

- The undertaking of further bird surveys between September 2025 – August 2026, in response to a holding objection from NatureScot initially from May 2025 and subsequently confirmed through a further consultation response from October 2025 following discussions with the Applicant in the interim period;
- The removal of turbine T18 (and associated access track) to address comments from Argyll and Bute Council. Deletion of turbine T18 reduces the total number of turbines from 12 to 11;
- Changes to the status of other wind farm projects within the cumulative baseline, since submission of Additional Information in November 2025, which itself was submitted to reflect changes to the cumulative baseline since submission of the Section 36 application in November 2024;
- Changes to operational wind farm noise guidance, with the introduction in July 2026 of new guidance from the Department for Energy Security and Net Zero dealing with 'Assessment and rating of noise from wind turbines'[1];
- Changes to the Scottish Government carbon calculator spreadsheet for wind farm developments on peatland since submission of the Section 36 application in November 2024; and
- The undertaking of a proportionate assessment based upon information currently available of the potential environmental impacts associated with a possible grid

[1] https://www.gov.uk/government/publications/assessment-and-rating-of-noise-from-wind-turbines-guidance

connection between Corr Chnoc Wind Farm and the electricity transmission network, prepared in response to the February 2026 Raeshaw Farms legal judgement[2].

1.1.4 Through this AI Report, the amended Corr Chnoc Wind Farm is referred to as 'the Revised Proposed Development', to reflect the deletion of turbine T18 and its associated access tracks and to distinguish the amended scheme from the original application, which continues to be referred to as 'the Proposed Development'.

1.1.5 With the exception of the deletion of turbine T18 and its associated access track there are no other changes to the layout of the Proposed Development. The turbine positions remain the same, maximum blade tip heights remain the same and the position and number of construction compounds and borrow pits remain the same. The only minor change relates to the layout of the Indicative Substation and BESS Facility, incorporating the inclusion of a secondary access point. The indicative layout of the facility has been amended to take account of updated National Fire Chiefs Council (NFCC) guidance on grid scale energy storage systems, which was published in December 2025[3].

1.1.6 To ensure the layout of the BESS facility complies with this new guidance, the indicative layout of this compound has been amended to include, *inter alia*, two separate points of vehicular access in additional to full perimeter track. The amended indicative layout is shown on **Updated Figure AI 4.15 'Indicative Substation and BESS Compound Layout'.** For clarity, the footprint and location of the BESS facility remains as per the submitted **Site Layout Plan Figure 4.1.** The minor and indicative nature of these changes has not necessitated any further assessment in this AI Report.

1.1.7 This AI Report should be read as an addendum to the EIA Report prepared in respect of the extant application under Section 36 of the 'Electricity Act 1989'[4] (as amended) (the 1989 Act) for the Proposed Development.

1.1.8 **EIA Report Chapter 5 'EIA Methodology'** sets out the approach taken in the preparation of the EIA Report for the Proposed Development with further information presented in the topic specific EIA Report Chapters.

1.1.9 **AI Report Chapters 4 – 7** set out the approach taken by authors to assessing the Revised Proposed Development noting in particular any changes to assessment methods, best practice guidance etc that may have changed in the period since submission of the EIA Report in November 2024. Details of additional ornithology surveys undertaken across 2025 and 2026 in response to the May 2025 NatureScot objection, and follow-on dialogue with the Applicant, are set out in **New Technical Appendices AI 8.1 - 8.7.**

[2] https://www.scotcourts.gov.uk/media/t4eds4lr/2026csih10-raeshaw-farms-limited-against-scottish-ministers-and-another.pdf
[3] https://nfcc.org.uk/our-services/building-safety/grid-scale-energy-storage-system-planning-guidance-for-fire-and-rescue-services/
[4] Electricity Act 1989. Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents

2 Background to the AI Report

2.1.1 The Local Planning Authority (Argyll and Bute Council) (the Council) considered the Proposed Development at planning committee on 22 October 2025 when it resolved to object, as follows:

'on the grounds that there are unresolved ornithology issues contrary to the provisions of NPF4 Policies 3 and 11 and LDP2 Policies 30 and 73, and it is not possible to reach a conclusion on the proposal's acceptability in this regard at this time. NOTE - If these matters are resolved to the satisfaction of NatureScot, Argyll & Bute Council will withdraw this objection. Should the objection remain unresolved, and the proposal progresses to Public Inquiry, Argyll & Bute Council would defer to NatureScot'

2.1.2 In its consultation response from 22 October 2025 the Council also confirmed that it '*does not object on landscape and visual grounds subject to the removal of Turbine 18*'. The Applicant is agreeable to this design change and the visualisations presented in Volume 3 of this AI Report reflect the design changes, with the omission of turbine T18. The Revised Proposed Development layout is shown on **Updated Figure AI 4.1 'Proposed Site Plan'**.

2.1.3 As a result of the deletion of turbine T18 it has been necessary to amend details set out in the previously submitted aviation lighting strategy (**EIA Report Technical Appendix 15.2**). The previous strategy, based upon the 12-turbine layout involved the installation of visible aviation lighting on turbines, T2, T6, T8, T10, T13, T14 and T18. As a result of the removal of turbine T18, an amended visible aviation lighting strategy was discussed and agreed with the Civil Aviation Authority (CAA) in June 2026 during which the CAA confirmed that:-

'I think we can accept moving the steady red medium intensity obstacle visible light from T14 to T16, given that there are IR lights on all of the turbines and that the WSW-ENE line of turbines will have a visible light alternately when viewed from the south and north'.

2.1.4 In light of these CAA discussions, the updated nighttime assessment set out in **AI Report Chapter 4 'Landscape and Visual'** proceeded on the basis that red, medium intensity aviation warning lights (2,000 candela) would be located on top of the nacelle of six of the 11 turbines, namely T2, T6, T8, T10, T13, and T16.

2.1.5 The Council's October 2025 consultation response also noted that it does not object on noise grounds, subject to the imposition of a condition with apportioned noise limits as suggested by the Council's noise consultant. In June 2026 the UK Government published new operational wind farm noise guidance as noted in Section 1.1. To take account of this new guidance, the deletion of turbine T18 and changes to the cumulative baseline an updated noise assessment has been carried out and is presented as **AI Report Chapter 6 'Noise'**.

2.1.6 The Applicant has engaged with NatureScot at regular intervals since receipt of its holding objection in May 2025, initially to examine the reasons behind the holding objection and latterly to discuss the additional survey effort required to address the holding objection and provide the basis for an updated ornithology assessment. Details of additional bird survey work undertaken by the Applicant over the course of 2025 and 2026 and an updated assessment of the Revised Proposed Development upon certain ornithological interests are set out in **AI Report Chapter 5 'Ornithology',** with a summary of key consultation events between the Applicant and NatureScot set out in **Table 5.1**.

2.1.7 Following submission of the application for the Proposed Development in November 2024, the Scottish Government's carbon calculator spreadsheet has been updated to Version 2.15.6. To reflect this update and to also take account of the deletion of turbine T18 and its associated access track an updated Climate Change Impact Assessment has been undertaken, which is presented in **AI Report Chapter 6 'Climate Change Impact Assessment'**. An updated carbon balance assessment using the Scottish Government's carbon calculator spreadsheet is submitted as **New Technical Appendix AI 18.2 'Carbon Calculator Inputs and Results'**.

2.1.8 The AI Report comprises the following:-

- Volume 1 – Written Statement;
- Volume 2 - Figures;
- Volume 3 - Landscape and Visual Visualisations;
- Volume 4 – Technical Appendices including redacted Technical Appendices containing confidential information (which previously would have been submitted as Confidential Appendices);
- Volume 5 – Confidential Appendices; and
- Non- Technical Summary.

2.1.9 The following updated or new documents are also submitted:-

- Planning Statement Addendum;
- Socio-economic Addendum; and
- A Grid Appraisal Report – providing information about, and an assessment of, a potential grid connection between the Revised Proposed Development and the electricity transmission network and to respond to the February 2026 Raeshaw Farms legal judgement (see Section 3 for further details).

2.2 AI Project Team

2.2.1 The AI Report has been compiled by Savills on behalf of the Applicant. While Savills had overall responsibility for compiling the AI Report and associated Non-Technical Summary, sub-consultants prepared specialist assessment chapters. The members of the project team and their respective roles are presented in **Table 2.1** below.

Table 2.1 Project Team Expertise and Qualifications

Chapter Number	Title	Company	Expertise/ Qualification
1 -3	Introduction Chapters	Savills	These chapters were prepared by Simon Herriot, a Director of Planning with Savills with 29 years' experience of planning. Over the last 20 years Simon has worked on numerous renewable energy developments, with a focus on onshore wind, often acting as lead EIA co-ordinator and lead planning consultant, while also appearing as a planning witness at various public inquiries. Simon and members of the wider Savills Planning Team also co-ordinated the 2024 EIA Report and 2025 AI Report for the Proposed Development. Simon is a member of the Royal Town Planning Institute.

Chapter Number	Title	Company	Expertise/ Qualification
4	Landscape and Visual Assessment	SLR	As with EIA Report Chapter 7 'Landscape and Visual Impact Assessment' this AI Report Chapter has been prepared by SLR Consulting. The author is Angus Elder, an experienced landscape planner and Chartered Member of the Landscape Institute. Angus has spent the past decade working on a wide range of projects, including authoring Landscape and Visual Impact Assessments (LVIAs) for large scale onshore wind farms, including those located in Argyll and Bute.
5	Ornithology	SLR and ReAmp	The ornithology assessment was carried out by Michael Austin (Associate Consultant, SLR Consulting Limited, MCIEEM) who has 20 years' experience as a consultant, being lead author of numerous EIA Report chapters, Habitats Regulations Assessment and Technical Reports. The assessment was reviewed by Rafe Dewar (principal ornithologist, ReAmp; BSc. (Hons.), MSc., MCIEEM) who has over 20 years' experience as a consultant, being lead author of numerous EIA Report chapters, Habitats Regulations Assessments, Technical Reports and Habitat Management Plans and attendance at public hearings for large infrastructure projects (onshore/offshore ornithology and ecology). Rafe authored Chapter 8 'Ornithology' of the Corr Chnoc EIA Report in 2024 when at MacArthur Green.
6	Noise	Metrica	This assessment has been carried out by Metrica Environmental Consulting Ltd ('Metrica') which specialises in providing technical environmental assessment and reporting for the renewable energy sector. This chapter was authored by Alan Moore BA(hons), Diploma in Acoustics and Noise Control, Member of the Institute of Acoustics (MIOA) and Associate of the Institute of Sustainability and Environmental Professionals (AISEP). Alan is a Director and the Lead Acoustics Consultant of Metrica Environmental Consulting Ltd, with over 16 years' experience in the assessment of wind farm noise, including authoring Chapter 14 'Noise' of the Corr Chnoc EIA Report in 2024.

Chapter Number	Title	Company	Expertise/ Qualification
7	Climate Change Impact Assessment	SLR	This chapter was authored by Simon Allen BSc, BSc. (Technical Director - Energy & Climate Change). Simon has over 19 years' experience as an Energy & Climate Change consultant. Over that time, he has been involved in managing and delivering Environmental Impact Assessments and planning applications for a wide range of renewable developments, as well as producing various technical reports for these projects. In particular, he has delivered climate change impact assessments for projects ranging from residential developments to mining, renewables and infrastructure projects

3 Raeshaw Farms Judgement

3.2.1 The February 2026 legal judgement: *Raeshaw Farms Limited v Scottish Ministers and Energiekontor UK Ltd* [2026] CSIH 10[5], confirmed that consideration must be given as to whether grid connection infrastructure associated with a given renewable energy development should be treated as a single 'project' for the purposes of EIA.

3.2.2 In considering this judgement, the Applicant responded to a request from the Energy Consents Unit (ECU) in May 2026 noting the following key points with regards to Corr Chnoc Wind Farm and a potential grid connection:-

- as part of the ongoing grid reform process, Corr Chnoc Wind Farm would transition to a Gate 1 contract in the near future (since May 2026 Corr Chnoc Wind Farm has transitioned to a Gate 1 contract)';
- the grid connection point and route connecting Corr Chnoc Wind Farm to the grid network cannot be known for certain at this time, until Corr Chnoc Wind Farm receives consent, the Applicant has re-applied during one of the future National Energy Systems Operator (NESO) application windows, and subsequently receives and signs a Gate 2 offer;
- The Raeshaw Farms judgement makes it clear that it is for the decision maker to determine what constitutes the 'EIA project'; and
- Having regard to the specifics of this case, there is the potential for the Corr Chnoc Wind Farm and the grid connection to be treated as a single 'project' in EIA terms, but that is a matter for the decision maker to conclude upon.

3.2.3 In light of these factors and to enable Scottish Ministers to reach a reasoned conclusion on the significant effects of the project (taking account of both Corr Chnoc Wind Farm and the potential grid connection) the Applicant has undertaken a proportionate, but high level, appraisal of the potential environmental effects of the grid connection, based on currently available information.

3.2.4 For clarity, the Applicant is not seeking consent for the proposed grid connection through the AI submission. Consent for the grid connection would be sought at a later date through an application by Scottish and Southern Energy Networks (SSEN).

3.2.5 The Applicant's assessment of the environmental effects of a possible grid connection is set out in the accompanying '**Corr Chnoc Wind Farm Grid Connection Appraisal'** and accompanying **Grid Connection Appraisal Figures 1 – 5**. The Grid Connection Appraisal establishes a Study Area which is likely to capture a connection route between the Revised Proposed Development and the Taynuilt electricity substation, provides information on assumptions about overhead line and underground cables and the design parameters that will likely apply to the future design of the grid connection when SSEN applies for consent.

3.2.6 The Study Area for the Grid Connection Appraisal extends to 4 kilometres (km) at its widest point and is shown on **Grid Connection Figure 1 'Indicative Grid Route and Study Area'**,

[5] https://www.scotcourts.gov.uk/media/t4eds4lr/2026csih10-raeshaw-farms-limited-against-scottish-ministers-and-another.pdf

which also shows the location of the Revised Proposed Development wind turbines, the proposed Corr Chnoc substation, the existing Taynuilt substation, cumulative wind farm locations and the route of existing electricity transmission and distribution lines.

3.2.7 The Grid Connection Appraisal considered the potential for environmental effects to arise upon the following disciplines in order to consider the potential for significant effects: -

- Cultural heritage;
- Ecology;
- Hydrology, Hydrogeology, Peat and Soils;
- Landscape and visual;
- Noise; and
- Traffic and access.

3.2.8 No detailed field survey, site investigations or route/alignment specific design has been undertaken to inform the Gird Connection Appraisal as the availability of information and public data was considered appropriate for the level of appraisal required at this stage. The Appraisal considered potential environmental effects during the construction and operational phases.

3.2.9 The Grid Connection Appraisal does not propose commitments or conditions for securing mitigation measures for the Proposed Grid Connection as that is considered to be beyond the remit of the Appraisal, given the indicative nature of the grid alignment and noting that these issues would be considered in the future as part of a consent application by SSEN, reflective of the final alignment and identified environmental effects. The Grid Connection Appraisal does however take into account best practice and standard mitigation measures that SSEN would likely need to consider as part of the detailed design and assessment of the Proposed Grid Connection.

3.2.10 The Grid Connection Appraisal concluded that construction and operation of the indicative grid connection would not be likely to result in significant environmental effects, subject to standard design refinement and mitigation. The Appraisal identified no basis on which the grid connection would significantly alter the nature or extent of environmental effects already identified for the Corr Chnoc Wind Farm as identified through the 2024 EIA Report and 2025 AI Report.

4 Landscape and Visual

List of Abbreviations

Abbreviation	Description
BESS	Battery Energy Storage System
CAA	Civil Aviation Authority
cd	Candela
CEMP	Construction Environmental Management Plan
GLVIA3	Guidelines for Landscape and Visual Impact Assessment
ICAO	International Civil Aviation Organisation
LCT	Landscape Character Type
LLA	Local Landscape Area
LSQ	Likely Special Quality
LVIA	Landscape and Visual Impact Assessment
NSA	National Scenic Area
SLQ	Special Landscape Quality
ZTV	Zone of Theoretical Visibility

4.1 Introduction

4.1.1 This assessment presents a further update to the findings of the Landscape and Visual Impact Assessment for Corr Chnoc Wind Farm ('the 2024 LVIA'), which forms part of the submitted 2024 Environmental Impact Assessment (EIA) Report accompanying the Section 36 (s36) application (ECU00006023). It should be read in conjunction with the **2024 LVIA**, which provides relevant landscape and visual baseline information and analysis, and where still relevant the 2025 'Update to LVIA Cumulative Assessment' which formed part of the Additional Information submission in 2025 (the 2025 AI) and which provides analysis in relation to the potential cumulative interaction between the Proposed Development and the Cruach Clenamacrie Wind Farm application (ECU00004841).

4.1.2 The 12 turbine layout that was assessed in the 2024 EIA Report ('the Proposed Development) has since been amended following the removal of Turbine (T) 18. The amended 11 turbine layout ('the Revised Proposed Development') therefore forms the basis of this updated assessment.

4.1.3 The update to the cumulative and night-time assessments identifies any changes to the likely significant effects that are predicted to arise between the Revised Proposed Development and the updated cumulative wind farm baseline, but also as a result of the removal of T18. The updated assessment has been prepared by Chartered Members of the Landscape Institute (CMLI) at SLR Consulting Ltd. ('SLR'), authors of **Chapter 6 'Landscape and Visual Assessment' of the 2024 EIA Report** and the **2025 AI Chapter 2, 'Update to LVIA Cumulative Assessment'**.

4.1.4 The cumulative assessment update reviews the cumulative effects of the Revised Proposed Development on the landscape resource - both direct effects and effects on how the landscape is perceived - and the effect on visual amenity (views) within the LVIA's 20 kilometre (km) Detailed Study Area. It does not present a further cumulative assessment of visual effects arising on residential property, because it is considered that with the exception to the Cruach

Clenamacrie proposal, there is no potential for the contribution of cumulative wind farms to materially alter the assessment previously made in the **2024 LVIA** in relation to the Residential Visual Amenity threshold at the relevant properties, due primarily to their distance from them and the degree of screening from intervening landform.

4.1.5 The night-time assessment update reviews the effects of aviation lighting on sensitive landscape and visual receptors in light of the removal of T18 (which was one of the lit turbines within the Proposed Development layout) and the subsequent changes that have been made to the Agreed Reduced Lighting Scheme (described in full in **Chapter 15 Aviation of the EIA Report**). In summary, the number of aviation lights proposed has reduced from seven (T2, T6, T8, T10, T13, T14, and T18) in the Proposed Development to six (T2, T6, T8, T10, T13, and T16) in the Revised Proposed Development.

4.1.6 The scope of the updated assessments is informed by the preliminary assessments for landscape and visual receptors included in **EIA Report, Chapter 6, Section 6.4**, which identified the relevant landscape and visual receptors that are likely to be subject to significant effects. As a consequence, a detailed assessment of effects is not necessarily provided for each landscape and visual receptor in the 45km LVIA Study Area (e.g. Viewpoints 7, 9, 17, and 18 as shown on **EIA Report Figure 6.6a**), although updated cumulative visualisations may have been produced for them.

4.1.7 The cumulative update is supported by the following new and updated figures:

- **New Figure AI 6.13j** Cumulative ZTV with Consented Beinn Ghlas Repowering; and
- **Updated Figure AI 6.15** Comparative ZTV of 2024 EIA Report and 2026 AI Aviation Lighting Schemes.

4.1.8 The following new and updated figures also illustrate supporting visualisations:

- **Updated Figures AI6.17 – AI6.34** Updated Cumulative Baseline Wirelines; and
- **New Figures AI6.35 – AI6.52** Comparative Aviation Lighting Wirelines.

4.2 Assessment Methodology and Significance Criteria

Assessment of Effects

4.2.1 The methodology is unchanged from that adopted within **EIA Report Chapter 6** to ensure direct comparison between the results of the assessments of the Proposed Development layout and the Revised Proposed Development. The methodology for the **2024 LVIA** is presented in full in **Technical Appendix 6.1 'LVIA Methodology' of the EIA Report**.

4.2.2 The **2024 LVIA** Methodology was prepared by a team of Chartered Landscape Architects at Optimised Environments Ltd (OPEN), which now forms part of SLR, and it accords with the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition[1] (GLVIA3). In practice, the SLR Methodology that is adopted for this assessment remains the same, but there has been a very slight modification to the assessment rating nomenclature (illustrated in **Table 4.1**), whereby, for example, a previously 'low-medium' sensitivity and/ or magnitude rating is now referred to as an equivalent 'medium-low' rating. These changes in the nomenclature are

[1] Landscape Institute and Institute of Environmental Management & Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition

immaterial and should not be interpreted as representing any change to the assessment methodology or significance of effects.

4.2.3 The significance of effects is assessed through a combination of the sensitivity of the landscape receptor or viewer and the magnitude of change that would result from the addition of the Revised Proposed Development.

4.2.4 For the purposes of this assessment, any effects with a significance level of major and major-moderate have been deemed significant (dark grey shaded boxes in **Table 4.1**). Moderate levels of effect have the potential, subject to the assessor's professional judgement, to be considered as significant or not significant, depending on the sensitivity and magnitude of change factors evaluated (light grey shaded boxes in **Table 4.1**). Effects within the white boxes are considered to be not significant at either a moderate/ minor, minor or negligible level. In accordance with GLVIA3, experienced professional judgement is applied to the assessment of all effects and reasoned justification is presented in respect of the findings of each case.

Table 4.1 Assessment of Significance Matrix

		Magnitude of Change					
		High	**High-Medium**	**Medium**	**Medium-Low**	**Low**	**Negligible**
Sensitivity	**High**	Major Significant	Major Significant	Major/ moderate Significant	Moderate Significant or Not Significant	Moderate/ minor Not Significant	Minor Not Significant
	High-Medium	Major Significant	Major/ moderate Significant	Moderate Significant or Not Significant	Moderate Significant or Not Significant	Moderate/ minor Not Significant	Minor Not Significant
	Medium	Major/ moderate Significant	Moderate Significant or Not Significant	Moderate Significant or Not Significant	Moderate/ minor Not Significant	Minor Not Significant	Minor Not Significant
	Medium-Low	Moderate Significant or Not Significant	Moderate Significant or Not Significant	Moderate/ minor Not Significant	Minor Not Significant	Minor Not Significant	Negligible Not Significant
	Low	Moderate Significant or Not Significant	Moderate/ minor Not Significant	Minor Not Significant	Minor Not Significant	Negligible Not Significant	Negligible Not Significant

Cumulative Assessment

4.2.5 NatureScot's guidance 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (2021)[2] suggests that *"the focus of the cumulative assessment will be on the additional effect of the project in conjunction with other developments of the same type…"* ['the baseline'].

4.2.6 The 'Guidelines for Landscape and Visual Impact Assessment' (2013) advises in relation to the baseline, that *"taking 'the Project' to mean the main proposal that is being assessed, it is considered that existing schemes and those which are under construction should be included in the baseline for both landscape and visual effects assessments (the LVIA baseline). The baseline for assessing cumulative landscape and visual effects should then include those schemes considered in the LVIA and in addition potential schemes that are not yet present in the landscape but are at various stages in the development and consenting process"* (para 7.13).

4.2.7 Cumulative effects are therefore assessed in this chapter as the additional changes caused by a proposal in conjunction with other similar developments arising in a specific cumulative development scenario (and not the combined totality of the cumulative effect of all past, present and future proposals together with a proposal). The Methodology set out in **Technical Appendix 6.1 of the EIA Report** (**Section 8.5**) considers three different cumulative development scenarios: 'operational and under-construction', 'consented', and 'application-stage'. While confidence in the likelihood of cumulative effects arising from the operational and under construction cumulative scenarios being realised is relatively high, the consented and application-stage scenarios are hypothetical, and they present a worst-case scenario. Cumulative effects that would arise in the consented and application-stage cumulative scenarios are uncertain and may therefore be of a lower magnitude in reality.

4.2.8 Significant cumulative landscape and visual effects arise where the addition of the proposed wind turbines leads to wind farms becoming one of the prevailing landscape and visual characteristics of a receptor that is sensitive to such change. It should be noted that if a proposal on its own is assessed to have a significant effect, it does not necessarily follow that the cumulative effect would also be significant. For example, the additional cumulative effect may be different when a proposal would be seen behind another cumulative development. In this situation, the cumulative effect of a proposal may be of a lower magnitude than its solus effects.

4.2.9 In considering the detailed cumulative effects described in the assessment, a broad statement relating to the combined cumulative effect of multiple windfarms in the area has also been provided in the conclusions. In accordance with GLVIA3 (para. 7.18), the comprehensiveness of these conclusions is necessarily limited though because SLR has not assessed the other cumulative developments in the Study Area and cannot therefore make a fully informed judgement.

Visible Aviation Lighting Assessment

4.2.10 The methodology for the updates to the aviation lighting assessment have been undertaken in accordance with NatureScot's 'Guidance on Aviation Lighting Impact Assessment' (2024)[3], which follows a similar approach to the **2024 LVIA** methodology (set out in paragraphs 7.17-

[2] NatureScot (2012) Guidance - Assessing the cumulative impact of onshore wind energy developments
[3] NatureScot (2024) Guidance on Aviation Lighting Impact Assessment

7.40 of **Technical Appendix 6.1 of the EIA Report**). However, as a consequence of the introduction of the new NatureScot Guidance, the updated assessment differs in two respects:

- night-time visualisations now illustrate reduced 200 candela (cd) intensity aviation lights only because sensor-controlled dimming is proposed (instead of both 200 cd and 2000 cd intensity as assessed in the **2024 LVIA**), and which is a direct result of the new NatureScot Guidance, and
- an assessment of visible aviation lighting has been included for all viewpoints within the 20km Detailed Study Area where significant effects might arise (instead of being limited to only those viewpoints containing night-time visualisations).

4.2.11 As mentioned previously, the aviation lighting assessment is provided in response to changes to the Revised Proposed Development's amended lighting scheme. In summary, the visual assessment of wind turbine aviation lighting is based on the following parameters:

- Red, medium intensity aviation warning lights (2,000cd) would be located on top of the nacelle of six ((T2, T6, T8, T10, T13, and T16) of the 11 wind turbines (see **Updated Figure AI 6.15**). These warning lights would conform to the International Civil Aviation Organisation (ICAO) specification as set out in Annex 14 Table 6-3 (ICAO, 2018);
- The red, medium intensity aviation warning lights would be controlled with sensor-controlled dimming, such that when the visibility is greater than 5km in horizontal direction from all turbine hubs, the brightness of the lights would be reduced from 2000cd to 200cd (10% of the minimum peak intensity). As dimming is included as embedded mitigation, the assessments (and photomontage visualisations) are based on reduced 200cd intensity aviation lights only, rather than 2000cd intensity in line with guidance (NatureScot, 2024, para 82);
- Vertical directional intensity mitigation is proposed, which could also give rise to reduced lighting intensities depending on the viewpoint location (however these vertical intensity reductions are not factored into the worst-case assessed or photomontages presented);
- In a letter dated 3 July 2024, the Civil Aviation Authority (CAA) agreed that low intensity mid tower mast lights would not be required;
- In accordance with 'CAA Policy and Guidelines on Wind Turbines' (2026)[4], the lights would be switched on 30 minutes after official sunset and switched off again 30 minutes before sunrise;
- The CAA policy and guidelines also require that a secondary light is fitted for use only when the primary light fails, and these would not be lit concurrently; and
- The steady red medium intensity lighting fixed to the top of the nacelles may appear to flicker on and off with blade rotation when the turbine blades pass between the lights and the observer, dependent on wind direction and the position of the observer.

[4] Civil Aviation Authority (2026) CAA Policy and Guidelines on Wind Turbines. CAP 764.

4.3 Baseline Conditions

Updated Cumulative Baseline

4.3.1 Since the **2025 AI 'Update to LVIA Cumulative Assessment'** was prepared, the cumulative wind farm situation in the LVIA's 20km Cumulative Study Area has changed. Specifically, the Beinn Ghlas Repowering planning application was granted planning permission by Argyll and Bute Council in September 2026, whereas it was previously considered as a pre-application Scoping stage proposal. To reflect this change, an updated cumulative baseline, based on a cut-off date of 21 September 2026, is provided in **Table 4.2** below. Only the status of the Beinn Ghlas Repowering project has changed since the **2025 AI 'Update to LVIA Cumulative Assessment'.**

Table 4.2 Cumulative Wind Energy Development within a 20km Radius

Name / Status	Distance to Nearest Proposed Turbine	Number of turbines	Blade tip height
Operational/ Under Construction			
Beinn Ghlas	4.1km	14	55m
Barran Caltunn	5.1km	2	67m
Carraig Gheal	5.9km	20	125m
An Suidhe	19.2km	23	80m
Consented			
Beinn Ghlas Repowering	2.9km	7	149.9m
Blarghour	14.8km	17	136.5m
Blarghour Variation	15.2km	14	180m
Ladyfield	19.6km	13	200m
Application / Appeal			
Cruach Clenamacrie	2.2km	6	200m
An Càrr Dubh	16.3km	13	180m
Scoping			
Barachander	7.7km	11	180m

4.3.2 Given the recent consenting of the Beinn Ghlas Repowering application, the updated cumulative assessment focusses on identifying any changes to the hypothetical consented and application-stage cumulative scenarios, where other consented and application-stage sites are considered to exist in the baseline (in addition to operational wind farms) respectively.

4.3.3 In considering the consented Beinn Ghlas Repowering application in the assessment for the consented cumulative scenario, it has been assumed that its presence is conditional on the removal of the operational Beinn Ghlas Wind Farm from the baseline.

4.4 Assessment of Potential Effects

Updated Cumulative Assessment

4.4.1 **Tables 4.3 – 4.5** present an updated assessment of potential changes to the landscape and visual effects, as a consequence of the updated cumulative baseline and the removal of T18. The updated assessment of effects should be read alongside the **2024 LVIA** presented in **EIA Report Chapter 6**, which continues to provide detailed baseline information and evaluation.

4.4.2 The findings of the **2024 LVIA** are presented in each of the following tables, with the updated changes and findings of this new assessment highlighted in the right-hand column of each table. Any change to the reported significance of effect from the **2024 LVIA** is identified.

- **Table 4.3** presents updated cumulative effects on landscape character;
- **Table 4.4** presents updated cumulative effects on landscape designations; and
- **Table 4.5** presents updated cumulative effects on representative viewpoints.

4.4.3 The updated cumulative assessment is supported by the following figures:

- **New Figure AI 6.13j** Cumulative ZTV with Beinn Ghlas Repowering Application; and
- **Updated Figures AI6.17 - AI6.34** Updated Cumulative Baseline Wirelines.

Table 4.3 Cumulative Effects on Landscape Character Types (LCTs) in Consented and Application-stage Cumulative Scenarios

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
2 High Tops / Ben Cruachan unit	high-medium	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: Theoretical cumulative visibility of the consented Beinn Ghlas Repowering proposal is predicted to arise across a large proportion of the areas predicted to receive theoretical visibility of the Revised Proposed Development in isolation, which form a relatively small part of the LCT unit primarily in the south-west. From these areas, at distances of over 10km, the addition of the Revised Proposed Development would slightly intensify the current perception of wind farm development across a similar area of the Craggy Upland LCT, which currently contains a small number of separate, but compact wind farms (see Viewpoint 13). The Revised Proposed Development would reduce the spacing between some of these wind farms. As a result, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would therefore remain the same relative to the level reported in the **2024 LVIA**, and consequently the level of cumulative effect would remain **moderate-minor** and **not significant**. The effect would be not significant because the cumulative interactions are moderated by the intervening distance, the compact form of the Revised Proposed Development, and also the large scale of the landscape.
		Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: Theoretical cumulative visibility of the Cruach Clenamacrie proposal is also predicted to arise across a large proportion of the areas predicted to receive theoretical visibility of the Revised Proposed Development in isolation, which forms a relatively small part of the LCT unit primarily in the south-west. From these areas, at distances of over 10km, the addition of the Revised Proposed Development would slightly intensify the current perception of wind farm development across a similar area of the Craggy Upland LCT, which would still contain a relatively small number of separate, but compact wind farms. The Revised Proposed Development would reduce the spacing between some of these wind farms. As a result,

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would therefore remain the same relative to the level reported in the **2024 LVIA** and the **2025 AI**, and consequently the level of cumulative effect would be **moderate** and **not significant**. The effect would be not significant because the cumulative interactions are moderated by the intervening distance, the compact form of the Revised Proposed Development, and also the large scale of the landscape.
2 High Tops / Beinn Bhreac unit	high-medium	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: Theoretical cumulative visibility of the consented Beinn Ghlas Repowering proposal is predicted to arise across a large proportion of the areas predicted to receive theoretical visibility of the Revised Proposed Development in isolation, which form a relatively small part of the LCT unit, primarily across southern and central areas. From these areas, at distances of over 9km, the addition of the Revised Proposed Development would reinforce and slightly intensify the current perception of wind farm development across the Craggy Upland LCT, which contains a small number of separate, but compact wind farms. As a result, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would therefore remain the same as the level reported in the **2024 LVIA**, which is **moderate-minor** and **not significant**.
		Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: Theoretical cumulative visibility of the Cruach Clenamacrie proposal is also predicted to arise across a large proportion of the areas predicted to receive theoretical visibility of the Revised Proposed Development in isolation, which forms a relatively small part of the LCT unit, primarily across southern and central areas. From these areas, at distances of over 9km, the addition of the Revised Proposed Development would continue to reinforce and slightly intensify the current perception of wind farm development

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						across the Craggy Upland LCT, which contains a small number of separate, but compact wind farms. These effects are likely to often be moderated by the position of the Revised Proposed Development beyond Cruach Clenamacrie, such that they would consolidate to form a single wind farm cluster. As a result, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would therefore remain the same as the level reported in the **2024 LVIA** and the **2025 AI**, which is **moderate-minor** and **not significant**.
7 Craggy Upland / NW Loch Awe unit	medium	Consented scenario: negligible	Consented scenario: **negligible** and **not significant**	-	-	Consented scenario: There is some limited theoretical cumulative visibility of the Beinn Ghlas Repowering proposal predicted to arise across areas around the north-west of the LCT unit and a band of hills to the south-west of Loch Avich (around Viewpoint 12). From the majority of these areas, the Revised Proposed Development is likely to be apparent in a separate context to the Beinn Ghlas Repowering proposal, extending the influence of wind farm development further across the north-west of the LCT unit, such that a **low** cumulative magnitude of change is predicted. Across some of the closest potentially affected parts of the LCT surrounding the Revised Proposed Development, a **high** cumulative magnitude of change would arise due to the addition of the Revised Proposed Development at close range, but also the short distance to the Beinn Ghlas Repowering proposal, which would be apparent to the east and north-east of these areas. The cumulative magnitude of change would reduce at greater distances across areas further south in the LCT unit where greater separation from the proposals would be experienced. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the **2024 LVIA**, and consequently the level of cumulative effects across some localised areas (in the context of the broader LCT unit) would be up to **major-moderate** and **significant**.

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
		Application-stage scenario: negligible	Application-stage scenario: **negligible** and **not significant**	Application-stage scenario: high	Application-stage scenario: **major-moderate** and **significant**	Application-stage scenario: There is also some limited theoretical cumulative visibility of the Cruach Clenamacrie proposal predicted to arise across areas around the north-west of the LCT unit and a band of hills to the south-west of Loch Avich. From the majority of these areas, the Revised Proposed Development is likely to be visible in the same part of the LCT's surroundings as the Cruach Clenamacrie proposal, increasing the extent of visible wind farm development in this part of the LCT unit's surroundings. However, across some of the closest potentially affected parts of the LCT surrounding the Revised Proposed Development, a **high** cumulative magnitude of change would arise due to the addition of the Revised Proposed Development at close range, but also the short distance to the Beinn Ghlas Repowering proposal, which would be apparent to the east and north-east of these areas. The cumulative magnitude of change would reduce at greater distances across areas further south in the LCT unit where greater separation from these two proposals would be experienced. The cumulative magnitude of change in this scenario would remain the same as the level reported in the **2025 AI**, and consequently the level of cumulative effects across some localised areas (in the context of the broader LCT unit) would be **major-moderate** and **significant**.
7a Craggy Upland with Settled Glens / Glen Lonan unit	high-medium	Consented scenario: negligible	Consented scenario: **negligible** and **not significant**	-	-	Consented scenario: There is some theoretical cumulative visibility of the Beinn Ghlas Repowering Proposal predicted across parts of this LCT unit in and around Glen Lonan, but also across the hills to the west and north-west of Loch Nell. Across many of these areas, the Revised Proposed Development will provide the primary influence due to its closer proximity and the greater levels of visibility predicted, while the Beinn Ghlas Repowering turbines would be situated at greater distances, and often appearing to be situated in a more recessed position in the surrounding hills. Given the comparatively modest influence of the Beinn Ghlas Repowering turbines from these areas, the cumulative magnitude of change would be **low**. The

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the **2024 LVIA**, and consequently the level of cumulative effects across some localised areas (in the context of the broader LCT unit) would be **moderate-minor** and **not significant**.
		Application-stage scenario: negligible	Application-stage scenario: **negligible** and **not significant**	Application-stage scenario: high	Application-stage scenario: **major** and **significant**	Application-stage scenario: There is widespread theoretical cumulative visibility of the Cruach Clenamacrie proposal predicted across large parts of this LCT unit. Given the distance between the Revised Proposed Development and the Cruach Clenamacrie proposal from some of these areas, the cumulative magnitude of change is likely to be **high** within and near Glen Lonan, where the Revised Proposed Development provides the strongest contribution to these effects. Given the relatively short distance between the furthest parts of the LCT from the two proposals, the cumulative magnitude of change would often remain relatively high where cumulative visibility is predicted at greater distances, but cumulative effects would be moderated where landform screening inevitably screens much of the wind turbines. The cumulative magnitude of change in this scenario would remain the same as the level reported in the **2025 AI**, and consequently the level of cumulative effects across some localised areas (in the context of the broader LCT unit) would be **major** and **significant**.
7a Craggy Upland with Settled Glens / Loch Scammadale unit	medium	Consented scenario: negligible	Consented scenario: **negligible** and **not significant**	-	-	Consented scenario: There is only limited theoretical cumulative visibility with the Beinn Ghlas Repowering proposal predicted across small parts of this LCT unit. Beinn Ghlas Repowering would be situated in a similar part of the surroundings of the LCT unit, but it would often appear to increase the horizontal extent of wind farm development and this would increase the cumulative magnitude of change. Given the intervening distance, the cumulative magnitude of change would generally be moderated to **medium** across the closest reaches of the LCT unit. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						2024 LVIA, and the level of cumulative effects across some localised areas (in the context of the broader LCT unit) would be **moderate** and **not significant**.
		Application-stage scenario: negligible	Application-stage scenario: **negligible** and **not significant**	Application-stage scenario: medium-low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: There is only limited theoretical cumulative visibility with the Cruach Clenamacrie proposal predicted across small parts of this LCT unit. The two proposed wind farms would be situated in a similar part of the surroundings of the LCT, and as a result it is likely that the Revised Proposed Development and the Cruach Clenamacrie proposal would appear as a single wind farm cluster. Nevertheless, the Revised Proposed Development would increase the horizontal extent of wind farm development, but given the intervening distance the cumulative magnitude of change would be moderated to **medium-low**. The cumulative magnitude of change in this scenario would therefore remain the same as the level reported in **the 2025 AI**, and the level of cumulative effects across some localised areas (in the context of the broader LCT unit) would be **moderate-minor** and **not significant**.
7b Craggy Coast & Islands / Oban-Melfort unit	high-medium	Consented scenario: negligible	Consented scenario: **negligible** and **not significant**	-	-	Consented scenario: There is some intermittent theoretical cumulative visibility with the Beinn Ghlas Repowering proposal predicted across scattered areas of this LCT unit, with visibility typically limited to upper sections of the turbines due to some landform screening. The wind farms would be situated in a relatively similar part of the surroundings of the LCT, with the Revised Proposed Development situated in a similar context, and on occasion appearing to form a single wind farm cluster. The Revised Proposed Development would therefore often horizontally extend this surrounding wind farm development which would increase the cumulative magnitude of change. From northern parts of the LCT unit, Beinn Ghlas Repowering and the Revised Proposed Development would also be situated within the context of the more distant, but smaller scale, operational Carraig Gheal Wind Farm, which would help to moderate cumulative effects to a relatively minor

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						degree. In summary, where cumulative visibility is predicted, the cumulative magnitude of change is likely to be limited to **low** due to limited influence of the Beinn Ghlas Repowering turbines. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the **2024 LVIA**, and the level of cumulative effects across some localised areas (in the context of the LCT unit) would be **moderate-minor** and **not significant**.
		Application-stage scenario: negligible	Application-stage scenario: **negligible** and **not significant**	Application-stage scenario: up to medium	Application-stage scenario: **major-moderate** and **significant**	Application-stage scenario: There is some intermittent theoretical cumulative visibility with the Cruach Clenamacrie proposal predicted across scattered areas of this LCT unit. The Cruach Clenamacrie proposal would be situated in a relatively similar part of the surroundings of the LCT to the Revised Proposed Development, with the Revised Proposed Development situated either in between Cruach Clenamacrie and Beinn Ghlas Repowering on occasion, or in front of them. The Revised Proposed Development would therefore often reduce the separation between the Cruach Clenamacrie and Beinn Ghlas Repowering proposals and this may increase the cumulative magnitude of change. From northern parts of the LCT unit, these proposals would be situated within the context of the more distant, but smaller scale, operational Carraig Gheal Wind Farm, which would moderate cumulative effects to a degree. Where cumulative visibility is predicted, the cumulative magnitude of change is likely to vary between **low** and **medium**. The cumulative magnitude of change in this scenario would therefore remain the same as the level reported in the **2025 AI**, and the level of cumulative effects across some localised areas (in the context of the broader LCT unit) would be **major-moderate** and **significant**.
18 Lowland Ridges & Moss / Moss of Achnacree unit	medium-low	Consented scenario: no change	Consented scenario: **no change** and **not significant**	-	-	Consented scenario: There is widespread theoretical cumulative visibility with the Beinn Ghlas Repowering proposal predicted across this LCT unit. The Revised Proposed Development would be visible to the west of the Beinn Ghlas Repowering turbines with varying levels of screening to the turbines associated with intervening

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						landform. There would be some reasonable separation between the Revised Proposed Development and the consented Beinn Ghlas Repowering turbines, as well as the operational Barran Caltunn turbines, and this would moderate the cumulative magnitude of change. As a result, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this cumulative scenario. The cumulative magnitude of change in the consented cumulative scenario would therefore increase relative to the level reported in the **2025 AI**, and consequently the level of cumulative effect would be **moderate-minor** and **not significant**.
		Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: up to high-medium	Application-stage scenario: **major-moderate** and **significant**	Application-stage scenario: There is widespread theoretical cumulative visibility with the Cruach Clenamacrie proposal predicted across this LCT unit. The Revised Proposed Development would be visible immediately to the west of the Cruach Clenamacrie turbines with varying levels of screening to the turbines associated with intervening landform. The turbines of the Revised Proposed Development (and Beinn Ghlas Repowering) would be perceived to be of a smaller scale than those associated with Cruach Clenamacrie due to their more recessed positions, which would distinguish the wind farms from one another, and this is likely to increase the cumulative magnitude of change. While Cruach Clenamacrie would form a slightly stronger influence upon the view due to its closer distance, the addition of the Revised Proposed Development would increase the horizontal extent of wind farm development apparent in the surroundings of the LCT, as well as filling part of the gap between the Cruach Clenamacrie and the operational Barran Caltunn turbines. As a result, a **medium** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this cumulative scenario. The cumulative magnitude of change in the application-stage cumulative scenario would therefore reduce slightly relative to the level reported in the **2025 AI** due to the more developed nature of the landscape baseline, and consequently the

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						level of cumulative effect would also reduce to **moderate** and **significant.**
20 Rocky Mosaic / Ardchatten unit	high-medium	Consented scenario: no change	Consented scenario: **no change** and **not significant**	-	-	Consented scenario: There is widespread theoretical cumulative visibility with the Beinn Ghas Repowering proposal predicted across this LCT unit. The Revised Proposed Development would be visible to the west of the Beinn Ghlas Repowering turbines with varying levels of screening to the turbines associated with intervening landform. There would be some reasonable separation between the Revised Proposed Development and the consented Beinn Ghlas Repowering turbines, as well as the operational Barran Caltunn turbines, and this would moderate the cumulative magnitude of change. As a result, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this cumulative scenario. The cumulative magnitude of change in the consented cumulative scenario would therefore increase relative to the level reported in the **2024 LVIA**, and consequently the level of cumulative effect would be **moderate-minor** and **not significant**.
		Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: up to medium-low	Application-stage scenario: **moderate** and **significant**	Application-stage scenario: There is widespread theoretical cumulative visibility of the Cruach Clenamacrie proposal predicted across the majority of this LCT unit. The Revised Proposed Development would be visible primarily beyond the Cruach Clenamacrie turbines but also slightly to the west of them, with varying levels of screening to the turbines associated with intervening landform. The turbines of the Revised Proposed Development (and Beinn Ghlas Repowering) would be perceived to be of a smaller scale than those associated with Cruach Clenamacrie due to their more recessed positions, which would distinguish the wind farms from one another, and this is likely to increase the cumulative magnitude of change. While Cruach Clenamacrie would form a stronger influence upon the view due to its closer distance, the addition of the Revised Proposed Development would slightly increase the horizontal extent of wind farm development apparent in the surroundings of the LCT.

Landscape Character Type	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						As a result, a **low** to **medium-low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would remain the same as the level reported in **the 2025 AI**, and the level of cumulative effects across some localised areas (in the context of the broader LCT unit) would be **moderate** and **significant.**

Table 4.4 Updated Summary of Cumulative Effects on Landscape Designations in Consented and Application-stage Cumulative Scenarios

Landscape Designation	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
Lynn of Lorn National Scenic Area (NSA)	high	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: There is theoretical cumulative visibility of the Beinn Ghlas Repowering proposal predicted across large parts of central, southern and some northern areas of the NSA at distances of over 10km from the Revised Proposed Development. The Revised Proposed Development would be visible to the south of Beinn Ghlas Repowering, in a similar part of the NSA's surroundings to the operational Carraig Gheal Wind Farm. The addition of the Revised Proposed Development would extend a closer influence of larger scale wind farm development further south across Mid Argyll when viewed from the NSA, albeit at distances of over 10km and across the Lynn of Lorn. Primarily as a consequence of the weak, distant influence of Beinn Ghlas Repowering, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario to Special Landscape Qualities (SLQs) 1, 2, 4, and 5, which all refer to the views or backdrop experienced from land within the NSA. There would be no change to the NSA's other three SLQs. The cumulative magnitude of change in this scenario relative to SLQs 1, 2, 4, and 5 would remain the same as the level reported in the **2024 LVIA**, and consequently the level of cumulative effect would also remain **moderate-minor** and **not significant.**
		Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: medium-low	Application-stage scenario: **moderate** and **not significant**	Application-stage scenario: There is theoretical cumulative visibility of the Cruach Clenamacrie proposal predicted across large parts of central, southern and some northern areas of the NSA at distances of over 10km from the Revised Proposed Development. Where visible in combination, the closer Cruach Clenamacrie development would form a more notable feature in the landscape due to its broader extent and the larger perceived scale of the turbines. In this context, the Revised Proposed Development would be visible to the south of Cruach Clenamacrie and Beinn Ghlas Repowering, in a similar part of the NSA's surroundings to the operational Carraig Gheal Wind Farm. The addition of the Revised Proposed Development would continue to extend the

Landscape Designation	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						influence of larger scale wind farm development further south across Mid Argyll when viewed from the NSA, albeit also at distances of over 10km and from across the Lynn of Lorn. As a result, a **medium-low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario to SLQs 1, 2, 4, and 5, which all refer to the views or backdrop experienced from land within the NSA. There would be **no change** to the NSA's other three SLQs. The cumulative magnitude of change in this scenario relative to SLQs 1, 2, 4, and 5 would remain the same as the level reported in the **2025 AI**, and consequently the level of cumulative effect would be **moderate** and **not significant.** In this instance, the cumulative effects arising as a result of the addition of the Revised Proposed Development would be not significant, due to the peripheral location of the Revised Proposed Development in relation to the more dramatic views that are referenced in the relevant SLQs. The contribution of the Revised Proposed Development to the cumulative effects experienced within the NSA is therefore limited.
Ben Nevis and Glen Coe National Scenic Area	high	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: There is theoretical cumulative visibility of the Beinn Ghlas Repowering proposal predicted across some very limited, elevated areas of the NSA at distances of over 18km from the Revised Proposed Development. The Revised Proposed Development would reinforce and intensify the existing pattern of distant wind farm development across the Craggy Uplands, which consists of a small number of separate, but compact wind farms. As a result, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario to SLQs 9 and 11. There would be **no change** to the NSA's other ten SLQs due to the addition of the Revised Proposed Development to the consented cumulative scenario. The cumulative magnitude of change in this scenario would remain the same as the level reported in the **2024 LVIA**, and consequently the level of cumulative effect upon these two SLQs would be **moderate-minor** and **not significant.**

Landscape Designation	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
		Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: There is theoretical cumulative visibility of the Cruach Clenamacrie proposal predicted across some very limited, elevated areas of the NSA at distances of over 18km from the Revised Proposed Development. In this context, the Revised Proposed Development would continue to reinforce and further intensify the pattern of distant wind farm development across the Craggy Uplands, which would still consist of a relatively small number of separate, but compact wind farms. A **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario to SLQs 9 and 11. There would be **no change** to the NSA's other ten SLQs due to the addition of the Revised Proposed Development to the application-stage cumulative scenario. The cumulative magnitude of change in this scenario would remain the same as the level reported in the **2025 A**I, and consequently the level of cumulative effect upon these two SLQs would be **moderate-minor** and **not significant.**
North West Argyll (Coast) Local Landscape Area (LLA)	high-medium	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: There is some intermittent theoretical cumulative visibility of the Beinn Ghlas Repowering proposal predicted across central and northern areas of this LLA at distances of between 3-8km from the Revised Proposed Development. Where visible together, the wind farms would be situated in a relatively similar part of the surroundings of the LLA, but they may often appear distinctly separate. The Revised Proposed Development is therefore likely to increase the horizontal extent of wind farm development in this part of the surroundings of the LLA. However, given the often considerable landform screening to large parts of the turbines where cumulative visibility is predicted, the cumulative magnitude of change to the Likely Special Quality (LSQ) comprising *"…the diversity of form and islands, sea and coast*" is likely to vary between **low** and **medium-low**. There would be **no change** to the LLA's other two LSQs due to the addition of the Revised Proposed Development to the consented cumulative scenario. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the **2024 LVIA**, and

Landscape Designation	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						consequently the level of cumulative effect upon this one LSQ would be **moderate** and **not significant**.
		Application-stage scenario: No change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: Up to medium	Application-stage scenario: **major-moderate** and **significant**	Application-stage scenario: There is some intermittent theoretical cumulative visibility of the Cruach Clenamacrie and Beinn Ghlas Repowering (to a lesser extent) predicted across eastern and central areas of this LLA at distances of between 2-8km from the Revised Proposed Development. Where visible together, the wind farms and the Revised Proposed Development would be situated in a relatively similar part of the surrounding of the LLA, but they may often appear distinctly separate. The Revised Proposed Development is therefore likely to further increase the horizontal extent of wind farm development in this part of the surroundings of the LLA. Given the considerable landform screening to large parts of the turbines across the closest parts of the LLA, where cumulative visibility is predicted, the cumulative magnitude of change to the LSQ comprising *"…the diversity of form and islands, sea and coast*" is likely to vary between **low** and **medium**. There would be **no change** to the LLA's other two LSQs due to the addition of the Revised Proposed Development to the application-stage cumulative scenario. The cumulative magnitude of change in this scenario would remain the same as the level reported in **the 2025 AI**, and consequently the level of cumulative effect upon this one LSQ would be **up to major-moderate** and **significant**.
Knapdale/ Melfort Local Landscape Area	high-medium	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: There is only theoretical cumulative visibility of the consented Beinn Ghlas Repowering proposal predicted across some small, elevated northern parts of this LLA. Where visible, the proposed wind farms would be situated in a similar part of the surroundings of the LLA, but there would be some separation between the Revised Proposed Development and the Beinn Ghlas Repowering proposal. The Revised Proposed Development would therefore increase the horizontal extent of visible wind farm development, and this would increase the cumulative magnitude of change. Given the intervening distance of between 8-19km, the cumulative magnitude of change to the LSQ

Landscape Designation	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						comprising *"…the diversity of form and islands, sea and coast"* would be moderated to **medium-low** or lower. There would be no change to the LLA's other nine LSQs due to the addition of the Revised Proposed Development to the consented cumulative scenario. The cumulative magnitude of change in this scenario would therefore increase slightly relative to the level reported in the **2024 LVIA**, and consequently the level of cumulative effect across some localised areas (in the context of the broader designated area) would be **moderate** and **not significant**.
		Application-stage scenario: negligible	Application-stage scenario: **minor** and **not significant**	Application-stage scenario: medium-low	Application-stage scenario: **moderate** and **not significant**	Application-stage scenario: There is theoretical cumulative visibility of the Cruach Clenamacrie proposal predicted across some elevated northern parts of the LLA. Where visible, the Cruach Clenamacrie proposal would be situated in a similar part of the surroundings of the LLA to the Revised Proposed Development, often appearing to form a single wind farm cluster, but also on occasion in the same context as the consented Beinn Ghlas Repowering proposal and the operational Carraig Gheal Wind Farm. The Revised Proposed Development would however increase the horizontal extent of the Cruach Clenamacrie proposal, and this would increase the cumulative magnitude of change. Given the intervening distance of between 7-20km, the cumulative magnitude of change to the LSQ comprising *"…the diversity of form and islands, sea and coast"* would be moderated to **medium-low** or lower. There would be **no change** to the LLA's other nine LSQs due to the addition of the Revised Proposed Development to the application-stage cumulative scenario. The cumulative magnitude of change in this scenario would therefore remain the same as the level reported in the 2025 AI, and consequently the level of cumulative effect across some localised areas (in the context of the broader designated area) would be **moderate** and **not significant**.

Landscape Designation	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
North Argyll Local Landscape Area	high-medium	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: There is intermittent distant theoretical cumulative visibility of the consented Beinn Ghlas Repowering proposal predicted across some elevated western parts of the LLA. Where visible, Beinn Ghlas Repowering would be situated in a part of the LLA's surroundings that is already subject to an external influence from a large number of operational and consented wind farms situated across the Craggy Uplands LCT. The Revised Proposed Development is likely to intensify this distant influence in combination with Beinn Ghlas Repowering. Given the intervening distance of over 10km, and the presence of closer operational and consented wind farms, the cumulative magnitude of change to the LSQs comprising *"…dramatic mountainous landform", "…juxtaposition of these mountains with narrow lochs and the sea and with the settled loch fringes"*, and *"…a richly scenic landscape composition"* would be moderated to **low** or a lower level. There would be **no change** to the LLA's other fourteen LSQs due to the addition of the Revised Proposed Development to the consented cumulative scenario. The cumulative magnitude of change in this scenario would therefore remain the same as the level reported in the **2024 LVIA**, and consequently the level of cumulative effect across some localised areas (in the context of the broader designated area) would be **moderate-minor** and **not significant**.
		Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: There is intermittent distant theoretical cumulative visibility of the Cruach Clenamacrie proposal predicted across some elevated western parts of the LLA. Where visible, Cruach Clenamacrie would be situated in a part of the LLA's surroundings that is already subject to an external influence from a large number of operational and consented wind farms situated across the Craggy Uplands LCT. The Revised Proposed Development is likely to intensify this distant influence in combination with Cruach Clenamacrie. Given the intervening distance of over 10km from the Revised Proposed Development, and the presence of closer operational and consented wind farms, the cumulative magnitude of change to the LSQs

Landscape Designation	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						comprising *"…dramatic mountainous landform", "…juxtaposition of these mountains with narrow lochs and the sea and with the settled loch fringes", and "…a richly scenic landscape composition"* would be moderated to **low** or a lower level. There would be **no change** to the LLA's other fourteen LSQs due to the addition of the Revised Proposed Development to the application-stage cumulative scenario. The cumulative magnitude of change in this scenario would therefore remain the same as the level reported in the **2025 AI**, and consequently the level of cumulative effect across some localised areas (in the context of the broader designated area) would be **moderate-minor** and **not significant**.

Table 4.5 Updated Summary of Cumulative Effects on Representative Viewpoints in Consented and Application-stage Cumulative Scenarios

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
Viewpoint 1: Dun Ladain, Fort	medium to high-medium	Consented scenario: no change	Consented scenario: **no change** and **not significant**	-	-	Consented scenario: There is no visibility of operational or consented cumulative wind farms in this view, and cumulative effects will therefore not arise. There is **no change** to the findings reported in **the 2024 LVIA**.
		Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: There is no visibility of operational, consented or application-stage cumulative wind farms in this view, and cumulative effects will therefore not arise. There is **no change** to the findings reported in the **2024 LVIA** and the **2025 AI**.
Viewpoint 2: Glen Lonan, near Clachadubh	high-medium	Consented scenario: no change	Consented scenario: **no change** and **not significant**	-	-	Consented scenario: There is no visibility of operational or consented cumulative wind farms in this view, and cumulative effects will therefore not arise. There is **no change** to the findings reported in the **2024 LVIA**.
		Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: There is theoretical visibility of a very short end section of a single blade associated with the Cruach Clenamacrie proposal, above the slopes of Deadh Choimhead to the north of Glen Lonan. The blade is unlikely to be readily apparent to viewers due to its scale and screening from forestry, and as such there would be no cumulative interaction with the Revised Proposed Development. The cumulative magnitude of change in this scenario would remain as **no change**, and consequently there would be no material change to findings of cumulative significance reported in the **2024 LVIA** and the **2025 AI.**

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
Viewpoint 3: C32 Road, near Dun-neil	high-medium	Consented scenario: no change	Consented scenario: **no change** and **not significant**	-	-	Consented scenario: There is theoretical visibility of two blades and one hub of the Beinn Ghlas Repowering proposal at distances of over 7km, situated beyond Glen Lonan. The addition of the perceived larger scale of the wind turbines associated with the Revised Proposed Development would form the primary focus of views from this location, increasing the horizontal field of view affected by wind farm development. Given the limited influence of the Beinn Ghlas Repowering turbines, the cumulative magnitude of change would be **low**. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the **2024 LVIA**, and the level of cumulative effect would increase to **moderate-minor** and **not significant.**
		Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: medium-low	Application-stage scenario: **moderate** and **significant**	Application-stage scenario: There is theoretical visibility of two blades and one hub associated with the Cruach Clenamacrie proposal at distances of approximately 3km, above hills to the west of Cruach Clenamacrie hill, and two blades and one hub of the consented Beinn Ghlas Repowering proposal at distances of over 7km, situated beyond Glen Lonan in between Cruach Clenamacrie and the Revised Proposed Development. In reality there may be some screening to the hub and a short section of the Cruach Clenamacrie blades due to intervening forestry on the ridgeline. The addition of the perceived larger scale of the wind turbines associated with the Revised Proposed Development would form the primary focus of views from this location, increasing the horizontal field of view affected by wind farm development. However, given the limited influence of the Cruach Clenamacrie and Beinn Ghlas Repowering turbines, the magnitude of cumulative change would be **medium**. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the **2025 AI**, but the level of cumulative effect would remain **moderate** and **significant.**

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
Viewpoint 4: A816 Kilmore	medium-low to high-medium	Consented scenario: no change	Consented scenario: **no change** and **not significant**	-	-	Consented scenario: There is no visibility of operational and consented cumulative wind farms in this view, and cumulative effects will therefore not arise. The cumulative magnitude of change in this scenario would remain as **no change**, and consequently there would be no material change to findings of cumulative significance reported in the **2024 LVIA**.
		Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: There is no visibility of operational, consented or application-stage cumulative wind farms in this view, and cumulative effects will therefore not arise. The cumulative magnitude of change in this scenario would remain as **no change**, and consequently there would be no material change to findings of cumulative significance reported in the **2024 LVIA** and the **2025 AI**.
Viewpoint 5: Pulpit Hill, Oban	high	Consented scenario: no change	Consented scenario: **no change** and **not significant**	-	-	Consented scenario: The Beinn Ghlas Repowering proposal would be theoretically visible (three blades and one hub) beyond the distant hills at distances of over 12km in the same context as the Revised Proposed Development. In reality, there would be some screening of the Beinn Ghlas Repowering turbine blades from intervening conifer forestry, and this would moderate the cumulative interaction. As such, it is likely from this location, and other areas of the viewpoint, that the cumulative interaction between these proposals would be very limited. It is therefore considered that the cumulative magnitude of change from the addition of the Revised Proposed Development would increase relative to the level reported in the **2024 LVIA** to **low**, and the level of cumulative effect would be **moderate-minor** and **not significant**.
		Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: There is theoretical visibility of all six wind turbines associated with the Cruach Clenamacrie proposal at distances of approximately 8km, with landform screening large parts of most of their towers, with the exception of one of the wind farm's central turbines. The Beinn Ghlas Repowering proposal would also be visible but to a lesser degree (three blades and one hub), beyond the distant hills at distances of over 12km. There would be some separation between the Revised Proposed Development and Cruach Clenamacrie, which is

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						likely to moderate the cumulative interaction between these two developments, particularly due to the levels of intervening woodland screening around Pulpit Hill, while the Beinn Ghlas Repowering turbines would also be subject to a degree of screening situated within a similar field of view to the Revised Proposed Development. As such, it is likely from this location, and other areas of the viewpoint, that the cumulative interaction between these wind farms would be very limited. As a consequence, it is considered that the cumulative magnitude of change from the addition of the Revised Proposed Development to this scenario would be **low**. The cumulative magnitude of change in this scenario would therefore remain the same relative to the level reported in the **2025 AI**, and the level of cumulative effect would be **moderate-minor** and **not significant.**
Viewpoint 6: A816, near Knipoch Hotel	high-medium	Consented scenario: no change	Consented scenario: **no change** and **not significant**	-	-	Consented scenario: There is no visibility of operational and consented cumulative wind farms in this view, and cumulative effects will therefore not arise. The cumulative magnitude of change in this scenario would remain as **no change**, and consequently there would be no material change to findings of cumulative significance reported in the **2024 LVIA**.
		Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: There is theoretical visibility of two turbines associated with the Cruach Clenamacrie proposal at distances of approximately 10km, including one to hub height, above the hills at the head of Loch Feochan. In reality, the Cruach Clenamacrie turbines would be screened to a large degree by some intervening forestry, which is apparent on the ridgeline of the hills. The Revised Proposed Development would however be visible above the same hills in combination with the Cruach Clenamacrie turbines, albeit with some limited separation between the two proposals, such that they would not present as one cohesive wind farm. Therefore, the separation and different perceived scale of the wind turbines would increase the cumulative magnitude of change, while the extent of landform and forestry screening would moderate it to **low**. The cumulative magnitude of change in this scenario would therefore increase relative to the level

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						reported in the **2024 LVIA**, and consequently the level of cumulative effect would also increase to **moderate-minor** and **not significant.**
Viewpoint 8: Blackcrofts, by North Connell Hall	high	Consented scenario: medium-low	Consented scenario: **moderate** and **not significant**	-	-	Consented scenario: There is theoretical visibility of six of the consented Beinn Ghlas Repowering turbines to the east of the Revised Proposed Development at distances of over 9km. In reality, the turbines would be obscured by the intervening woodland and therefore there would be no discernible cumulative interaction from this viewpoint. The cumulative magnitude of change in this scenario would therefore remain as **medium-low** in the consented cumulative scenario, and consequently there would be no material change to findings of cumulative significance reported in the **2024 LVIA**, and a **moderate** and **not significant** cumulative effect is predicted.
		Application-stage scenario: medium-low	Application-stage scenario: **moderate** and **not significant**	Application-stage scenario: medium	Application-stage scenario: **major-moderate** and **significant**	Application-stage scenario: There is theoretical visibility of all six wind turbines associated with the Cruach Clenamacrie proposal at distances of approximately 4-5km, with landform screening large parts of the majority of their towers, with the exception of one western turbine. Part of the Beinn Ghlas Repowering proposal would also be theoretically visible beyond Cruach Clenamachrie at distances of over 9km, but the turbines would be obscured by intervening woodland. The Revised Proposed Development would be visible immediately to the west of Cruach Clenamacrie with varying levels of screening to the turbines associated with intervening landform. The turbines of the Revised Proposed Development would be perceived to be of a smaller scale than those associated with Cruach Clenamacrie, which would distinguish the two wind farms from one another, and this is likely to increase the cumulative magnitude of change. While Cruach Clenamacrie would form the prevailing influence upon the view due to its closer distance, the addition of the Revised Proposed Development would increase the extent of wind farm development, as well as filling part of the gap between Cruach Clenamacrie and the operational Barran Caltunn turbines. As a result, a **medium** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						scenario. The cumulative magnitude of change in this scenario would therefore remain the same relative to the level reported in the **2025 AI**, and consequently the level of cumulative effect would be **major-moderate** and **significant.**
Viewpoint 10: Oban-Lismore Ferry	high-medium	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: Part of the consented Beinn Ghlas Repowering proposal (two hubs and four blades) would be theoretically visible above the hill ridges to the north of the Revised Proposed Development at distances of over 16km, occupying a narrow sector of the view. The Revised Proposed Development would occupy a closer position on the mainland and a broader sector of the view,such that it would appear visibly separate to Beinn Ghlas Repowering. Similar to the operational Carraig Gheal turbines, the Beinn Ghlas Repowering turbines would appear slightly more elevated than the Revised Proposed Development, which appears more embedded in the Mid Argyll landscape. Overall, the cumulative interaction between the wind farms would be limited for the factors summarised above. A **low** cumulative magnitude of change is therefore predicted to arise from the addition of the Revised Proposed Development in this cumulative scenario, which is an increase relative to the level reported in the **2024 LVIA**, and consequently the level of cumulative effect would be **moderate-minor** and **not significant.**
		Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: medium-low	Application-stage scenario: **moderate** and **significant**	Application-stage scenario: There is theoretical visibility of all six wind turbines associated with the Cruach Clenamacrie proposal at distances of approximately 11km, with landform screening to small parts of their towers. Part of the Beinn Ghlas Repowering proposal (two hubs and four blades) would also be theoretically visible beyond Cruach Clenamacrie at distances of over 16km. The Revised Proposed Development would be visible to the south or west of these other proposals with some separation apparent between the Cruach Clenamacrie and Beinn Ghlas Repowering cluster. While the wind farms would be apparent within a similar sector of the view, the Cruach Clenamacrie and Beinn Ghlas cluster would appear slightly more elevated than the Proposed Development, which is slightly more embedded in the Mid Argyll

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						landscape. As a result, while the horizontal extent of the Revised Proposed Development is slightly larger than for Cruach Clenamacrie, it has a slightly weaker influence on the view. A **medium-low** cumulative magnitude of change would therefore arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would therefore remain the same relative to the level reported in the **2025 AI**, and consequently the level of cumulative effect would be **moderate** and **significant.**
Viewpoint 11: Tralee Beach, Ardmucknish Bay	medium	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: All of the proposed Beinn Ghlas Repowering turbines would be theoretically visible beyond North Ledaig, with only limited landform screening to some of their lower towers. The Revised Proposed Development would be visible to the west of the Beinn Ghlas Repowering turbines, separated by an area of moorland hills. The Revised Proposed Development would therefore maintain a degree of separation, ensuring that the hills within the view remain a landscape with occasional wind farms (rather than a wind farm landscape). As a result, a **medium-low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario, due primarily to the broad horizontal extent of wind farm development relative to existing and consented wind farms. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the **2024 LVIA**, but the level of cumulative effect would remain **moderate-minor** and **not significant.**
		Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: high-medium	Application-stage scenario: **major-moderate** and **significant**	Application-stage scenario: There is theoretical visibility of all six wind turbines associated with the Cruach Clenamacrie proposal at distances of approximately 10km, with only limited landform screening to small parts of their towers. All of the proposed Beinn Ghlas Repowering turbines would also be theoretically visible beyond the southernmost Cruach Clenamacrie turbines, with only limited landform screening to some of their lower towers. The Revised Proposed Development would be visible immediately to the south of the Cruach Clenamacrie proposal with only limited separation between the two wind farms. The wind farms

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						would therefore be apparent within a similar sector of the view, but their contrasting designs would distinguish the wind farms from one another and subsequently increase the cumulative magnitude of change. The Revised Proposed Development consisting of an evenly spaced, linear turbine layout, Cruach Clenamacrie forming three distinct couplets of turbines, and Beinn Ghlas Repowering consisting of more distant turbines that appear smaller in scale. Cruach Clenamacrie and the Revised Proposed Development would exert a comparable influence on the view. As a result, a **high-medium** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario, due primarily to the broad horizontal extent of wind farm development. The cumulative magnitude of change in this scenario would therefore remain the same relative to the level reported in the **2025 AI**, and consequently the level of cumulative effect would be **major-moderate** and **significant.**
Viewpoint 12: Barr Liath	medium-low	Consented scenario: medium	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: The proposed Beinn Ghlas Repowering turbines would be theoretically visible in a different sector of the view to the Revised Proposed Development, close to Carraig Gheal Wind Farm, but with the majority of the turbine towers concealed by landform. The Revised Proposed Development would be apparent further to the west of Beinn Ghlas Repowering with notable separation remaining between the two wind farms, ensuring that the view remains characterised by a landscape with occasional wind farms. As a result, a **medium** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would remain the same relative to the level reported in the **2024 LVIA**, and consequently the level of cumulative effect would be **moderate-minor** and **not significant.**
		Application-stage scenario: medium	Application-stage scenario: **moderate-**	Application-stage scenario: low	Application-stage scenario: **minor** and	Application-stage scenario: There is theoretical visibility of five of the six wind turbines associated with the Cruach Clenamacrie proposal at distances of over 17km, but landform would screen the near entirety of three turbines and smaller sections of the towers of the other two

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
			minor and **not significant**		**not significant**	turbines. The proposed Beinn Ghlas Repowering turbines would also be theoretically visible in a different sector of the view, close to Carraig Gheal Wind Farm, but with the majority of the turbine towers also subject to landform screening. The Revised Proposed Development would be apparent within the same sector of the view as Cruach Clenamacrie, such that the wind farms would integrate so that they are perceived as a single cohesive wind farm cluster. Considerable separation would remain between this cluster and Beinn Ghlas Repowering, ensuring that the view remains characterised by a landscape with occasional wind farms. As a result, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would remain the same relative to the level reported in the **2025 AI**, and consequently the level of cumulative effect would be **minor** and **not significant.**
Viewpoint 13: Ben Cruachan	high-medium	Consented scenario: medium-low	Consented scenario: **moderate** and **not significant**	-	-	Consented scenario: There is full theoretical visibility of the Beinn Ghlas Repowering turbines (>9km) at closer distances than the Revised Proposed Development (>14km). The Revised Proposed Development would reduce the spacing between operational and consented wind farms situated across the Craggy Uplands, which currently consists of a small number of separate, but compact wind farms. The addition of the Revised Proposed Development would therefore slightly intensify this existing characteristic when experienced in the panoramic views from the summit of Ben Cruachan. As a result, a **medium-low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would remain the same relative to the level reported in the **2024 LVIA** and the level of cumulative effect would remain **moderate** and **not significant.** The effect would be not significant because the cumulative interactions are moderated by the intervening distance, the compact form of the Revised Proposed Development, and also the depth and expansiveness of the panoramic view.

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
		Application-stage scenario: medium-low	Application-stage scenario: **moderate** and **not significant**	Application-stage scenario: medium-low	Application-stage scenario: **moderate** and **not significant**	Application-stage scenario: There is full theoretical visibility of the Cruach Clenamacrie (>11km) and Beinn Ghlas Repowering (>9km) proposals at slightly closer distances than the Revised Proposed Development (>14km). The Revised Proposed Development would reduce the spacing between these wind farms situated across the Craggy Uplands, which currently consists of a small number of separate, but compact wind farms. The addition of the Revised Proposed Development would therefore slightly intensify this existing characteristic when experienced in the panoramic views from the summit of Ben Cruachan. As a result, a **medium-low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in **the 2025 AI**, but the level of cumulative effect would remain **moderate** and **not significant.** The effect would be not significant because the cumulative interactions are moderated by the intervening distance, the compact form of the Revised Proposed Development, and also the depth and expansiveness of the panoramic view.
Viewpoint 14: Kilcheran, Lismore	high-medium	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: Part of the consented Beinn Ghlas Repowering proposal would be theoretically visible to the east of the Revised Proposed Development and the operational Carraig Gheal development at distances of over 19km. The Revised Proposed Development would be visible in a similar sector of the view to the operational Carraig Gheal Wind Farm. The addition of the Revised Proposed Development, appearing to be more embedded in the Mid Argyll landscape, would extend the perception of larger scale wind farm development further south in views of the mainland, away from the Lorn Mountains. The cumulative interaction between these wind farms would be relatively weak though due to the narrow sector of the view occupied by the Carraig Gheal and Beinn Ghlas Repowering Wind Farms. As a result, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						magnitude of change in this scenario would therefore remain the same relative to the level reported in the **2024 LVIA**, and the level of cumulative effect would be **moderate-minor** and **not significant.**
		Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: medium	Application-stage scenario: **major-moderate** and **significant**	Application-stage scenario: There is theoretical visibility of all six wind turbines associated with the Cruach Clenamacrie proposal at distances of approximately 14km, with landform screening to small parts of their lower towers. Part of the Beinn Ghlas Repowering proposal would also be theoretically visible beyond Cruach Clenamacrie at distances of over 19km. The Revised Proposed Development would be visible to the south of Cruach Clenamacrie in a similar sector of the view to the operational Carraig Gheal Wind Farm. The addition of the Revised Proposed Development, appearing to be more embedded in the Mid Argyll landscape, would extend the perception of larger scale wind farm development further south in views of the mainland, away from the Lorn Mountains. As a result, a **medium** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would remain the same relative to the level reported in the **2025 AI**, and the level of cumulative effect would be **major-moderate** and **significant.**
Viewpoint 15: Oban-Mull Ferry	high-medium	Consented scenario: low	Consented scenario: **moderate-minor** and **not significant**	-	-	Consented scenario: Part of the consented Beinn Ghlas Repowering proposal would be theoretically visible to the east of the Revised Proposed Development and the operational Carraig Gheal development at distances of over 19km. The Revised Proposed Development would be visible in a similar sector of the view to the more distant operational Carraig Gheal Wind Farm (21km), which has only a modest influence upon the view. The addition of the Revised Proposed Development, situated closer to the viewpoint and in between Beinn Ghlas Repowering and Carraig Gheal, would intensify the influence of wind farm development on the mainland to the south of the Lorn Mountains. The cumulative interaction between these wind farms would be relatively weak though due to the narrow sector of the view occupied by the

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						Carraig Gheal and Beinn Ghlas Repowering Wind Farms and the intervening distance. As a result, a **medium-low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the **2024 LVIA**, and the level of cumulative effect would be **moderate** and **not significant.**
		Application-stage scenario: low	Application-stage scenario: **moderate-minor** and **not significant**	Application-stage scenario: medium	Application-stage scenario: **major-moderate** and **significant**	Application-stage scenario: There is theoretical visibility of all six wind turbines associated with the Cruach Clenamacrie proposal at distances of approximately 14km, with only some limited landform screening to varying proportions of their towers. Part of the consented Beinn Ghlas Repowering proposal (three hubs and two blades) would also be theoretically visible to the south of Cruach Clenamacrie at distances of over 19km, but its contribution to cumulative effects would be lessened by this screening and its recessed position beyond landform. The Revised Proposed Development would be visible to the west of these proposals, materially extending the horizontal field of view that would be affected by wind farm development, such that it would occupy a relatively broad sector of the view. The Revised Proposed Development would be situated within a less dramatic sector of the view, while Cruach Clenamacrie appears to be situated closer to the Lorn mountains. Given the material contribution of the Revised Proposed Development to these cumulative effects, a **medium** cumulative magnitude of change would arise in this scenario. The cumulative magnitude of change in this scenario would remain the same relative to the level reported in the **2025 AI**, and the level of cumulative effect would be **major-moderate** and **significant**.
Viewpoint 16: Duart Castle, Isle of Mull	high-medium	Consented scenario: low	Consented scenario: **moderate-minor** and	-	-	Consented scenario: Part of the consented Beinn Ghlas Repowering proposal (three hubs and three blades) would be theoretically visible to the east of the Revised Proposed Development and the operational Carraig Gheal development at distances of over 24km. The Revised Proposed Development would be visible in a similar sector of the view

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
			not significant			to the more distant operational Carraig Gheal Wind Farm (25km), which has only a modest influence upon the view. The addition of the Revised Proposed Development, situated closer to the viewpoint and in between Beinn Ghlas Repowering and Carraig Gheal, would intensify the influence of wind farm development on the mainland to thesouth of the Lorn Mountains. The cumulative interaction between these wind farms would be relatively weak though due to the narrow sector of the view occupied by the Carraig Gheal and Beinn Ghlas Repowering Wind Farms and the intervening distance. As a result, a **low** cumulative magnitude of change would arise from the addition of the Revised Proposed Development in this scenario. The cumulative magnitude of change in this scenario would therefore increase relative to the level reported in the **2024 LVIA**, and the level of cumulative effect would be **moderate-minor** and **not significant.**
		Application-stage scenario: no change	Application-stage scenario: **no change** and **not significant**	Application-stage scenario: medium-low	Application-stage scenario: **moderate** and **not significant**	Application-stage scenario: There is theoretical visibility of all six wind turbines associated with the Cruach Clenamacrie proposal at distances of approximately 19km, with only some limited landform screening to varying proportions of their towers. Part of the Beinn Ghlas Repowering proposal (three hubs and three blades) would also be theoretically visible to the south of Cruach Clenamacrie at distances of over 24km, but its contribution to cumulative effects would be lessened by this screening, its recessed position beyond landform, and distance. The Revised Proposed Development would be visible to the south and west of these proposals, materially extending the horizontal field of view that would be affected by wind farm development into a similar sector of the view to the operational Carraig Gheal Wind Farm, such that it would occupy a relatively broad sector of the view. The addition of the Revised Proposed Development, appearing to be embedded in the Mid Argyll landscape, would extend the perception of larger scale wind farm development further west in views of the mainland. The Revised Proposed Development is situated within a less dramatic sector of the view, while Cruach Clenamacrie appears to be situated closer to the Lorn mountains. Given the material contribution of the Revised

Viewpoint	Sensitivity	EIA Report Cumulative Magnitude of Change	EIA Report Cumulative Significance of Effect	2025 AI Cumulative Magnitude of Change	2025 AI Cumulative Significance of Effect	Updated Cumulative Assessment
						Proposed Development to these cumulative effects, a **medium-low** cumulative magnitude of change would arise in this scenario. The cumulative magnitude of change in this scenario would remain the same relative to the level reported in the **2025 AI**, and the level of cumulative effect would be **moderate** and **not significant**.

Updated Visible Aviation Lighting Assessment

Night-time Environment

4.4.4 The theoretical baseline night-time environment is represented on a Baseline Light Pollution map (**EIA Report Figure 6.14**), which illustrates baseline light pollution across the 20km Detailed Study Area and the LVIA viewpoints.

4.4.5 While this map provides a useful basis for gauging theoretical levels of lighting at night-time, it is important to remember that it does not indicate the presence of localised lighting such as domestic or security lighting that can locally affect views at night-time. Personal lighting is also not represented; that is, lighting within or attached to a moving vehicle (e.g. internal lighting, headlights, dashboard etc.) that will be experienced by people travelling on roads and railway lines, or lighting associated with boats, which can have a considerable effect on the way that the night-time environment is experienced by people. Torches and cycle lights are also used by people walking or cycling during hours of darkness, and this light affects their environment/ dark adaptation and ability to appreciate the full intensity of other light sources.

4.4.6 Nonetheless, the map does provide a useful indication of lighting levels throughout the Detailed Study Area and at the LVIA viewpoints. Baseline lighting is generally concentrated to the north-west and north of the Detailed Study Area within 5km of the Revised Proposed Development where there are a few settlements and key routes, with occasional pockets of lighting across the remaining parts of the Detailed Study Area. The highest levels of baseline lighting are experienced across and around the town of Oban but also slightly to the north of it around Dunbeg and Connel. There is also lighting concentrated around the village of Taynuilt to the north-east of the Revised Proposed Development. Elsewhere, across the majority of the Detailed Study Area, the map shows only very occasional traces of light or no light pollution. Beyond the Detailed Study Area, light remains generally absent with the notable exception of lighting associated with the Glensanda quarry to the north-west of Lismore, and lighting associated with occasional boats in the Lynn of Lorn.

Aviation Lighting Scheme ZTV

4.4.7 The Revised Proposed Development's aviation lighting scheme would have a relatively similar ZTV to the Proposed Development layout (see **Updated Figure AI6.15**), with the exception of some small areas where lighting would no longer be theoretically visible and some smaller additional areas where theoretical visibility would be introduced. A few of the areas removed from the ZTV are located within 5km of the Revised Proposed Development, most notably the area around Kilmore (including Viewpoint 4) and Loch Nell, and the area to the south-east of Connel. At distances greater than 5km from the Revised Proposed Development, the reduction in theoretical visibility is more intermittent with shards of visibility removed across parts of the Lynn of Lorn, and some distant elevated hilltops. In contrast, there is only one notable area of theoretical visibility added by the amended lighting scheme, albeit very small, at the head of Loch Feochan. In summary, the Revised Proposed Development's amended lighting scheme would reduce the overall extent of theoretical visibility of aviation lighting across the Detailed Study Area.

Turbine Lighting Visibility

4.4.8 **Table 4.6** provides a summary of the potential visibility of nacelle lights for each of the LVIA viewpoints, based on the comparative wirelines contained in **New Figures AI 6.35-6.52**. Shaded cells denote a reduction in the number of aviation lights theoretically visible from a viewpoint relative to the Proposed Development layout.

4.4.9 There would be a reduction in the number of aviation lights theoretically visible at 12 of the 18 LVIA viewpoints, with visibility of lighting being removed entirely from Viewpoint 4 (A816 Kilmore). The removal of lighting at Viewpoint 4 is representative of a change that would also be experienced across other parts of the settlement of Kilmore.

Table 4.6 Comparative Turbine Lighting Visibility at Viewpoints

No.	Viewpoint	Nacelle Lighting Theoretical Visibility	
		Proposed Development Lighting Scheme	Revised Proposed Development Lighting Scheme
1	Dun Ladain, Glen Feochan	1	1
2	Glen Lonan, near Clachadubh	2	2
3	C32 Road, near Dun-neil	7	6
4	A816 Kilmore	1	0
5	Pulpit Hill, Oban	7	6
6	A816, near Knipoch Hotel	4	3
8	Blackcrofts, by North Connell Hall	6	5
10	Oban-Lismore Ferry	7	6
11	Tralee Beach, Ardmucknish Bay	7	6
12	Barr Liath	6	5
13	Ben Cruachan	7	6
14	Kilcheran, Lismore	7	6
15	Oban-Mull Ferry	7	6
16	Duart Castle, Isle of Mull	7	6

Turbine Lighting Intensity

4.4.10 In addition to existing mitigation via dimming, a reduction in lighting intensity may also be achieved through vertical directional intensity mitigation. This is achieved through the use of a light that emits a reduced lighting intensity dependent on the degree of the vertical angle of view from the light in relation to landform. At this stage, the potential reduction in intensities is based on an indicative light model (CEL-WT-MIC). It is therefore important to note that the vertical directional intensity mitigation information is provided as an illustrative example, and the Applicant has not committed to using this specific light fitting, as this choice is normally made at turbine procurement stage. The viewpoints within the areas closest to the Revised Proposed Development can benefit from reduced intensity as a result of the negative vertical angle in which the nacelle lights would be viewed. **Table 4.7** below provides updated potential reduced intensities for the nacelle lights at each of the LVIA viewpoints for the Revised Proposed Development. From a review of the lighting intensity values in the table, it can be seen that the light intensity at each of the viewpoints for the Revised Proposed Development are likely to be comparable with those for the Proposed Development Layout (provided in the **2024 LVIA**), with the exception of Viewpoint 4 where lighting would no longer be visible.

Table 4.7 Updated Turbine Lighting Intensity (Candela) at Viewpoints Assuming Directional Intensity Mitigation

No.	Viewpoint	Nacelle Lighting Intensity	
		Vertical Angle	200cd
1	Dun Ladain, Glen Feochan	-5.95	<17 cd
2	Glen Lonan, near Clachadubh	-5.79	<17 cd

No.	Viewpoint	Nacelle Lighting Intensity	
		Vertical Angle	200cd
3	C32 Road, near Dun-neil	-4.82	<17 cd
4	A816 Kilmore	-	-
5	Pulpit Hill, Oban	-1.96	98 - 42 cd
6	A816, near Knipoch Hotel	-2.83	42 – 22 cd
8	Blackcrofts, by North Connell Hall	-1.93	98 - 42 cd
10	Oban-Lismore Ferry	-1.49	98 - 42 cd
11	Tralee Beach, Ardmucknish Bay	-1.37	98 - 42 cd
12	Barr Liath	0.27	220 – 250 cd
13	Ben Cruachan	2.68	220 – 250 cd
14	Kilcheran, Lismore	-1.05	98 - 42 cd
15	Oban-Mull Ferry	-1.41	98 - 42 cd
16	Duart Castle, Isle of Mull	-0.92	220 – 98 cd

Night-time Assessment of LVIA Viewpoints

4.4.11 Whilst night-time photographic visualisations were only produced for four of the LVIA viewpoints in the **2024 LVIA** (VPs 5, 6, 8 and 14), an assessment has been carried out for all other LVIA viewpoints in this chapter, see **Table 4.8**. This assessment is informed by the comparative wirelines contained in **New Figures AI 6.35-6.52** and the information provided in **Tables 4.6** and **4.7**, and where appropriate draws on the detailed assessments carried out for the representative viewpoints in the **2024 LVIA**.

4.4.12 The susceptibility of visual receptors differs at night reflecting the different activities people undertake during the hours of darkness. For example, drivers using roads at night tend to be more focused on the road and the area illuminated by headlights than during the day and may have oncoming headlights or other reflective signage and dashboard lighting drawing their attention, and affecting an individual's dark adaptation, resulting in lower susceptibility. On the other hand, people taking part in activities where darkness is essential, such as stargazing, are of higher susceptibility. The assessment therefore takes account of this difference in susceptibility for receptors at night compared with during the day and receptor sensitivity at night is recorded in **Table 4.8**.

Table 4.8 Updated Night-time Assessment of LVIA Viewpoints

No.	Viewpoint	Sensitivity	Magnitude of Change	Significance of Effect
1	Dun Ladain, Glen Feochan	medium to high-medium	high	**major** and **significant**
2	Glen Lonan, near Clachadubh	high-medium	high	**major** and **significant**
3	C32 Road, near Dun-neil	high-medium	high	**major** and **significant**
4	A816 Kilmore	medium-low to high-medium	no change	**no effect**

No.	Viewpoint	Sensitivity	Magnitude of Change	Significance of Effect
5	Pulpit Hill, Oban	high	low	**moderate-minor** and **not significant**
6	A816, near Knipoch Hotel	high-medium	medium-low	**moderate** and **significant**
8	Blackcrofts, by North Connell Hall	high	low	**moderate-minor** and **not significant**
10	Oban-Lismore Ferry	high-medium	low	**moderate-minor** and **not significant**
11	Tralee Beach, Ardmucknish Bay	medium	low	**moderate-minor** and **not significant**
12	Barr Liath	medium-low	medium-low	**moderate-minor** and **not significant**
13	Ben Cruachan	high-medium	low	**moderate** and **not significant**
14	Kilcheran, Lismore	high-medium	negligible	**minor** and **not significant**
15	Oban-Mull Ferry	high-medium	low	**moderate-minor** and **not significant**
16	Duart Castle, Isle of Mull	high-medium	negligible	**minor** and **not significant**

4.4.13 The duration of the effect of the lights on receptors is likely to be over a relatively short period, more commonly experienced during evening and morning hours of darkness, around dusk and sunrise. The ICAO standard requires the lights to be switched on 30 minutes after sunset, and 30 minutes before sunrise, removing the likelihood of visible lighting during twilight. The effect of the Revised Proposed Development's visible aviation lighting at night would also be limited by the activity of receptors at night.

4.4.14 Receptors that experience views at night are generally limited to residents of settlements, rural properties and motorists using the road network. Views from within properties are also likely to be restricted by the use of window coverings, particularly in winter (it should be noted that this was not a factor of consideration in the assessment). The assessment of night-time effects is based on clear nighttime viewing conditions. At dusk and sunrise, it may be possible to identify the formation of the turbines with the lighting switched on, but only in conditions of good and excellent visibility. At sunrise it may also be possible, in views from the west, to see the turbines with lights switched on whilst backlit by the rising sun. Views from remote uplands and hills, rural farmland and footpaths etc. are visited infrequently at night therefore numbers of receptors affected will be low.

4.4.15 At night, whilst the six proposed aviation lights would be visible from the surrounding landscape, the turbines themselves would not be visible during the hours of darkness. Nevertheless, the assessment of night-time effects for the Revised Proposed Development has predicted significant effects for some of the viewpoints. Significant effects predicted to arise as a consequence of the Revised Proposed Development's visible aviation lighting are limited to Viewpoints 1, 2, 3, and 6.

Night-time Effects on the Lynn of Lorn National Scenic Area

4.4.16 An assessment of the night-time effects that would be experienced from the Lynn of Lorn NSA has been provided in relation to an elevated location on Lismore at Viewpoint 14 (Kilcheran, Lismore) and also from a closer location on the Oban-Lismore Ferry at Viewpoint 10 (Oban-Lismore ferry). While there are no specific Special Landscape Qualities (SLQs) associated with the NSA's dark skies, these viewpoints are considered to provide a representative assessment of the effects that would be experienced across parts of the NSA.

4.4.17 From Kicheran on Lismore, the aviation lights at distances of over 15km would appear to be situated within a landscape context that contains some baseline lighting associated with coastal settlements, including the town and harbour of Oban, which are apparent along the coastline situated in between the NSA and the Site of the Revised Proposed Development. The assessment of the Proposed Development's lighting scheme in the 200cd light intensity scenario concluded that the magnitude of change upon these views at night-time would be negligible and not significant. Given the reduction in the number of aviation lights associated with the Revised Proposed Development, it has been assessed in the previous section that the magnitude of change at Viewpoint 14 would remain negligible, which would lead to a minor and not significant effect.

4.4.18 From the closer location upon the Oban-Lismore Ferry (Viewpoint 10), the aviation lights at distances of over 12km would also be apparent within a landscape context that contains some baseline lighting associated with coastal settlements, but the influence of Oban would be weaker due to intervening landform associated with the island of Kerrera. The slightly closer location of the viewpoint would also slightly increase the magnitude of change of the lighting upon the view, relative to more elevated and distant views experienced from Lismore. In summary, a low magnitude of change would arise to the view at night-time, which would lead to a moderate-minor and not significant effect.

Cumulative Night-time Effects

4.4.19 On review of the cumulative wind farm baseline, there is only potential for significant cumulative effects from aviation lighting to arise with the Cruach Clenamacrie proposal in the hypothetical application-stage cumulative scenario. An updated cumulative assessment for the application-stage cumulative scenario is therefore provided in the following sections.

Cumulative Night-time Effects on LVIA Viewpoints

4.4.20 An assessment of cumulative night-time visual effects in the application-stage cumulative scenario on the LVIA viewpoints (except for VPs 7,9, 17 and 18 as previously explained) is provided in **Table 4.9** below.

Table 4.9 Summary of Cumulative Night-time Effects on Representative Viewpoints in Application-stage Cumulative Scenario

No.	Viewpoint	Sensitivity	Cumulative Magnitude of Change	Significance of Effect
1	Dun Ladain, Glen Feochan	medium to high-medium	no change	**no cumulative effect**
2	Glen Lonan, near Clachadubh	high-medium	no change	**no cumulative effect**

No.	Viewpoint	Sensitivity	Cumulative Magnitude of Change	Significance of Effect
3	C32 Road, near Dun-neil	high-medium	medium	**moderate** and **significant**
4	A816 Kilmore	medium-low to high-medium	no change	**no cumulative effect**
5	Pulpit Hill, Oban	high	low	**moderate-minor** and **not significant**
6	A816, near Knipoch Hotel	high-medium	medium-low	**moderate** and **not significant**
8	Blackcrofts, by North Connell Hall	high	medium-low	**moderate** and **not significant**
10	Oban-Lismore Ferry	high-medium	medium-low	**moderate** and **not significant**
11	Tralee Beach, Ardmucknish Bay	medium	medium-low	**moderate-minor** and **not significant**
12	Barr Liath	medium-low	low	**minor** and **not significant**
13	Ben Cruachan	high-medium	low	**moderate-minor** and **not significant**
14	Kilcheran, Lismore	high-medium	low	**moderate-minor** and **not significant**
15	Oban-Mull Ferry	high-medium	low	**moderate-minor** and **not significant**
16	Duart Castle, Isle of Mull	high-medium	low	**moderate-minor** and **not significant**

4.4.21 The assessment of cumulative night-time visual effects has predicted significant cumulative effects for one of the LVIA viewpoints in the application-stage cumulative scenario. This significant cumulative effect is predicted to arise at Viewpoint 3 where road users who are travelling eastbound may experience views of lights associated with Cruach Clenamacrie and the Revised Proposed Development at relatively close range. The duration of the effect of the lights on road users at this viewpoint is likely to be over a relatively short period due to the speed of the vehicles and the changing orientation of the road.

Cumulative Night-time Effects on Landscape Designations

4.4.22 Cumulative night-time effects that would be experienced from the Lynn of Lorn NSA are described in relation to Viewpoints 10 (Oban-Lismore ferry) and 14 (Kilcheran, Lismore), which are considered to provide a representative assessment of the cumulative night-time effects that would be experienced across parts of the NSA. In summary, it is considered that a low cumulative magnitude of change is likely to arise at these locations during night-time, which

would lead to moderate-minor and not significant cumulative effects. Effects of a similar nature and magnitude are also likely to arise across other parts of the NSA where cumulative visibility of the Revised Proposed Development and the Cruach Clenamacrie proposal's lighting is experienced.

4.5 Summary

4.5.1 This update to the **2024 LVIA** and the **2025 AI** has evaluated the likely changes to previous findings because of an update to the cumulative wind farm baseline and the changes to the Proposed Development, specifically the removal of turbine T18 and an associated reduction to the aviation lighting scheme. The updated assessment presented in this chapter is supported by a range of updated and new plan graphics and visualisations, which are referenced where relevant in the preceding text.

Conclusions on Cumulative Effects

4.5.2 The update to the cumulative assessment confirms that there would be material changes to the findings of the cumulative assessment in the **2024 LVIA** and the **2025 AI** for a few receptors in the consented and application-stage cumulative scenarios, due to the consenting of the Beinn Ghlas Repowering proposal and the introduction of the Cruach Clenamacrie application-stage proposal. These cumulative effects are considered to be localised in extent in the context of the Study Area.

4.5.3 In summary, the following receptors are predicted to experience **significant** cumulative effects during the daytime[5]:

Consented cumulative scenario:

- Landscape Character Types:
    - 7 Craggy Upland LCT / NW Loch Awe unit*.

Application-stage cumulative scenario:

- Landscape Character Types:
    - 7 Craggy Upland LCT / NW Loch Awe unit;
    - 7a Craggy Upland with Settled Glens LCT / Glen Lonan unit;
    - 7b Craggy Coast & Islands LCT / Oban-Melfort unit;
    - 18 Lowland Ridges & Moss LCT / Moss of Achnacree unit; and
    - 20 Rocky Mosaic LCT / Ardchatten unit.
- Landscape Designations:
    - LSQ 2 of the North West Argyll (Coast) LLA comprising *"…the diversity of form and islands, sea and coast"*[6]

[5] An asterisk denotes a significant effect that was not previously identified in the 2024 LVIA and the 2025 AI.
[6] No significant cumulative effects are predicted to arise upon the integrity of the LLA.

- Viewpoints:
    - Viewpoint 3: C32 Road, near Dun-neil;
    - Viewpoint 8: Blackcrofts, by North Connell Hall;
    - Viewpoint 11: Tralee Beach, Ardmucknish Bay;
    - Viewpoint 14: Kilcheran, Lismore; and
    - Viewpoint 15: Oban-Mull Ferry.

4.5.4 In relation to the significant cumulative effects predicted on LSQ 2 of the North West Argyll (Coast) LLA comprising *"…the diversity of form and islands, sea and coast"* in the hypothetical application stage cumulative scenario, it is considered that these effects would not be sufficient to result in significant cumulative effects on the integrity of the designation. This is due to the localised geographical extent (in the context of the broader designated area) of these significant cumulative effects, which are found primarily in the south-eastern part of the LLA.

4.5.5 In addition to those landscape and visual receptors listed above, as per the cumulative assessment provided in the **2025 AI**, significant cumulative visual effects are still predicted to also arise in the hypothetical application-stage cumulative scenario (due to the cumulative interaction between the Revised Proposed Development and the Cruach Clenamacrie proposal) at the following residential properties:

- 2. Clachadubh; and
- 3. Glenamachrie Farmhouse and Bungalows.

4.5.6 As per the assessment in the **2025 AI**, effects upon the visual amenity of residents at both of the above properties would not reach the Residential Visual Amenity Threshold.

4.5.7 The significant cumulative effects summarised above relate to the additional landscape and visual effects of the Revised Proposed Development in the context of a hypothetical consented or application-stage cumulative scenario that makes assumptions about existing and proposed wind farms, rather than the combined effects of all of the relevant wind farms on the landscape and/ or visual receptors.

4.5.8 In relation to potential combined effects, it is considered that the Revised Proposed Development in itself would not alter the current perception of the surrounding landscape possessing a 'landscape with wind farms' characteristic. There are no operational and consented wind farm developments within close enough proximity to alter this perception, and whilst the cumulative application-stage scenario would further intensify this characteristic (as a result of the introduction of the Cruach Clenamacrie), the perception of a 'landscape with wind farms' would be maintained. This is primarily as a result of the relatively modest scale of the Revised Proposed Development and cumulative wind farms in relation to the surrounding large-scale landscape, the separation between wind farms due to the local topography, but also the appearance of the Revised Proposed Development which is often perceived to be embedded in the local landscape.

Conclusions on Night-time Effects

4.5.9 The update to the night-time assessment contains some additional findings of significance in relation to the potential effects of visible aviation lighting, which are considered to be localised in extent in the context of the Study Area. These significant effects have been identified as a result of the broader scope of the night-time assessment that is now advocated by NatureScot's 'Guidance on Aviation Lighting Impact Assessment' (2024), and not as a consequence of any

increase to the magnitude of the lighting effects assessed in the **2024 LVIA**. On the contrary, the updated night-time assessment has found that there would be a slight reduction in the lighting effects as a consequence of the reduction in the number of aviation lights (most notably at Viewpoint 4, where visibility of lighting has been removed entirely).

4.5.10 Receptors at the following locations are predicted to experience **significant** visual effects during night-time:

- Viewpoint 1: Dun Ladain, Glen Feochan;
- Viewpoint 2: Glen Lonan, near Clachadubh;
- Viewpoint 3: C32 Road, near Dun-neil; and
- Viewpoint 6: A816, near Knipoch Hotel.

4.5.11 The updated cumulative assessment also identifies that **significant** cumulative effects would arise in the hypothetical application-stage cumulative scenario at Viewpoint 3 during night-time due to the interaction between the lighting of the Revised Proposed Development and the lighting of the Cruach Clenamacrie proposal. No other significant cumulative effects are predicted to arise during night-time as a result of aviation lighting.

5 Ornithology

List of Abbreviations

Abbreviation	Description
ARSG	Argyll Raptor Study Group
CIEEM	Chartered Institute of Ecology and Environmental Management
C-PGR	Counterfactual of Population Growth Rate
CRA	Collision Risk Assessment
CRAA	Collision Risk Analysis Area
CRM	Collision Risk Modelling
BDMP	Bird Disturbance Management Plan
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
IOF	Important Ornithological Feature
(O)HMP	(Outline) Habitat Management Plan
NHZ	Natural Heritage Zone
PVA	Population Viability Analysis
SNH	Scottish Natural Heritage (now NatureScot)
VP	Vantage Point

5.1 Introduction

5.1.1 This chapter of the Additional Information (AI) Report updates aspects of the assessment set out in the **Environmental Impact Assessment Report (EIA Report) Chapter 8 'Ornithology'** (November 2024) for the proposed Corr Chnoc Wind Farm (the Proposed Development) primarily to consider the following matters in the intervening period:

- The deletion of turbine T18 and associated access track; and
- The gathering of additional data, and undertaking analyses, for white-tailed eagle, golden eagle and red-throated diver in response to a consultation response and follow-on discussions with NatureScot.

5.1.2 With the exception of the deletion of turbine T18 and its associated access track, there are no other changes to the Proposed Development (of relevance to ornithology) compared to that assessed in **EIA Report Chapter 8 'Ornithology'**. Accordingly, the Proposed Development represents a 'maximum design scenario' and therefore unless stated otherwise, predicted impacts and levels of significance in EIA Report Chapter 8 'Ornithology' are unchanged and considered to be worst-case.

5.1.3 Throughout this chapter the revised Corr Chnoc Wind Farm including the removal of turbine T18 is referred to as 'the Revised Proposed Development'. The original proposal as submitted in November 2024 is referred to as 'the Proposed Development' for consistency with the November 2024 EIA Report and to distinguish it from the Revised Proposed Development.

5.1.4 The initial NatureScot consultation response for the Proposed Development dated 16 May 2025, contained a holding objection with respect to ornithology, summarised in **Section 5.4** and **Table 5.1**. Following subsequent consultation between the Applicant and NatureScot,

NatureScot's final position was provided in their response on 08 October 2025 (refer to **Table 5.1**) which identified two main requirements:

- modelling and assessment of golden eagle satellite tag data to determine impacts on the golden eagle territory; and
- a further year of white-tailed eagle flight activity surveys, using revised VPs, to support more reliable collision risk predictions.

5.1.5 This AI chapter addresses NatureScot's concerns with respect to these reasons for the holding objection, and other comments made in NatureScot's responses since the EIA Report submission. It considers effects on golden eagle, white-tailed eagle and red-throated diver. For all other species, the current and future baseline with respect to ornithology is unchanged from the 2024 EIA Report, and the conclusions are unchanged.

5.1.6 The Applicant has undertaken further bird survey work over the course of 2025/26 to provide the basis for an updated ornithology assessment within this AI.

5.1.7 This chapter is supported by the following figures and technical appendices:

- Volume 2, Figures:
  - New Figure AI 8.11: Vantage Points & Viewsheds 2025-2026; and
  - New Figure AI 8.12: Golden Eagle Flights 2025-2026;
- Volume 4, Technical Appendices:
  - New AI Technical Appendix 8.1: Ornithology;
  - New AI Technical Appendix 8.2: Review of Secondary Vantage Point Locations. Avian Ecology (2026)
  - New AI Technical Appendix 8.3: White-tailed Eagle Population Model;
  - New AI Technical Appendix 8.4: Collision Risk Modelling;
  - New AI Technical Appendix 8.5: An investigation into the possible cumulative impact of additional mortality on the Scottish White-tailed Eagle Population. Dr Alan Fielding and Dr Matt Geary (2026);
  - New AI Technical Appendix 8.6: White-tailed Eagle Avoidance Rate Review. ReAmp (2026); and
  - New AI Technical Appendix (Redacted) 8.7: Corr Chnoc Wind Farm. An analysis of potential golden eagle habitat loss using Satellite Tracking Data and the GET Model. Dr Alan Fielding (2026).
- Volume 5: Confidential Appendices:
  - New Figure CAI 8.23: White-tailed Eagle Non-Breeding Season 2025-2026;
  - New Figure CAI 8.24: White-tailed Eagle Breeding Season 2026;
  - New Figure CAI 8.25: Red-throated Diver 2025; and
  - New Technical Appendix (Confidential) AI 8.8: An analysis of roosting behaviour, and the potential loss of roosts, in the Beinn Ghlas (G/LAW1) golden eagle home range. Dr Alan Fielding (2026).

5.2 Legislation, Policy and Guidance

5.2.1 Please refer to **Section 8.2 EIA Report Chapter 8 'Ornithology'** for the key legislation, national and local policies and industry standard guidance, of relevance to ornithology. Updates to policy and guidance since the original application submission are listed below. These updates are minor and do not materially affect the approach to the assessment and predicted impacts in the **EIA Report Chapter 8 'Ornithology'**.

Policy:

- The Scottish Biodiversity List (updated in 2025)[1].

Guidance:

- Guidance on using an updated collision risk model to assess bird collision risk at onshore wind farms (Band 2024)2, update of Band (2007);
- Recommended bird survey methods to inform impact assessment of onshore wind farms (NatureScot, 2025a3), update of SNH (2017);
- Assessing the significance of impacts on bird populations from onshore wind farms that do not affect protected areas (NatureScot, 2025b4), update of SNH (2018); and
- Assessing the cumulative impacts of onshore wind farms on birds (NatureScot 20255), update of SNH (2018).

5.3 Assessment Methodology and Significance Criteria

Method of Baseline Characterisation

Extent of the Study Area

5.3.1 The study area within which information relating to the presence and distribution of ornithological features relating to this AI Chapter has been assessed includes the footprint of the Revised Proposed Development, together with appropriate species- and impact-specific buffers.

5.3.2 **T**he **New Figure AI 8.11** shows the vantage point locations, with associated 2 km viewsheds in additional to the updated turbine layout.

[1] https://www.gov.scot/publications/scottish-biodiversity-list/
[2] https://www.nature.scot/doc/guidance-using-updated-collision-risk-model-assess-bird-collision-risk-onshore-wind-farms
[3] https://www.nature.scot/doc/recommended-bird-survey-methods-inform-impact-assessment-onshore-windfarms
[4] https://www.nature.scot/doc/guidance-assessing-significance-impacts-bird-populations-onshore-wind-farms-do-not-affect-protected
[5] https://www.nature.scot/doc/guidance-assessing-cumulative-impacts-onshore-wind-farms-birds

Desk Study

5.3.3 Additional information has been provided in support of this Chapter:

- **New AI Technical Appendix 8.5**: An investigation into the possible cumulative impact of additional mortality on the Scottish White-tailed Eagle Population. Dr Alan Fielding and Dr Matt Geary (2026);
- **New AI Technical Appendix (Redacted) 8.7**: Corr Chnoc Wind Farm. An analysis of potential golden eagle habitat loss using Satellite Tracking Data and the GET Model. Dr Alan Fielding (2026); and
- **New AI Technical Appendix (Confidential) 8.8**: An analysis of roosting behaviour, and the potential loss of roosts, in the Beinn Ghlas (G/LAW1) golden eagle home range. Dr Alan Fielding (2026).

Field Surveys

5.3.4 The assessment in this AI Chapter is based on the following additional ornithological field surveys conducted specifically for the Revised Proposed Development:

- Flight activity surveys – September 2025 to August 2026;
- Breeding diver surveys and diver focal loch flight activity surveys – June and July 2025; and
- Scarce breeding bird surveys (focussing on eagles) – spring 2026.

5.3.5 Where applicable, the original EIA baseline survey data are also considered.

5.3.6 Details of the EIA survey methodologies, effort and results were provided in the **EIA Report Technical Appendix 8.1.** The AI survey effort and results are presented in the **New AI Technical Appendix 8.1**. Sensitive information relating to the location of nest sites of Schedule 1 breeding species were presented in the **EIA Report Confidential Technical Appendix 8.2** and updated results are presented in **Volume 5**: **New Figure CAI 8.23**, **New Figure CAI 8.24** and **New Figure CAI 8.25**. Field survey areas were defined with reference to NatureScot guidance (SNH, 20173) and based on the Proposed Development layout, before the decision was taken to remove T18 from the Proposed Development.

5.3.7 A total of four Vantage Point (VP) locations were adopted over the course of the flight activity surveys; three (VPs 8,9,10) between September 2025 and August 2026; and four (VPs 8,9,10,11) from February 2026 to August 2026 (further details in **Table 5.1**[6]). Viewshed coverage of the Revised Development Proposal turbine locations is shown in **New Figure AI 8.11**.

[6] The requirement of VP11 formed part of the consultation process between the Applicant and NatureScot. **Table 5.1** includes the conclusion of the peer review of the vantage point selections, conducted by Avian Ecology.

Predicting effects

5.3.8 The assessment of potentially significant effects upon ornithological features follows the same methodology as that used for **EIA Report Chapter 8 'Ornithology'**; i.e. following the principles of CIEEM (2018[7]) guidance.

5.4 Consultee Responses to EIA Report

NatureScot Consultation Summary

5.4.1 NatureScot initially lodged a holding objection to the application in May 2025 because it considered that the ornithological information did not adequately address potential effects of the Proposed Development on ornithological features (golden eagle, white-tailed eagle and red-throated diver). Their main concerns related to:

- the location and coverage of vantage points and adequacy of associated survey data;
- the population information used in white-tailed eagle and golden eagle assessments;
- potential loss of habitat from the G/LAW1 golden eagle territory; and
- cumulative effects for golden eagle and white-tailed eagle.

5.4.2 After ongoing consultation, by October 2025, NatureScot considered that the Applicant's responses to the May 2025 holding objection had not resolved all these matters and maintained its holding objection. It identified two main requirements:

- modelling and assessment of golden eagle satellite tag data to determine impacts on the golden eagle territory; and
- a further year of white-tailed eagle flight activity surveys, using revised VPs, to support more reliable collision risk predictions.

5.4.3 Subsequent consultation between the Applicant and NatureScot during 2026 focused on:

- agreeing the locations of the three VPs selected for the additional flight activity surveys;
- assessing whether a fourth VP was required;
- preparing a revised white-tailed eagle Population Viability Analysis (PVA);
- updating the golden eagle territory assessment;
- assessing golden eagle roost use; and
- discussing the interpretation of satellite tag data and Golden Eagles Topographical (GET) modelling results.

5.4.4 By August 2026, the methodology for golden eagle habitat and roost analyses had been accepted by NatureScot and there was an apparent broad agreement on the interpretation of the analyses. The principal outstanding matter therefore relates to NatureScot's assessment of

[7] CIEEM (2018; updated 2024). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (version 1.3). Chartered Institute of Ecology and Environmental Management, Winchester.

white-tailed eagle effects, which are depended on the completed 2025-26 flight activity surveys and associated collision risk modelling, presented in this chapter.

5.4.5 **Table 5.1** includes a summary of the specific points related to ornithology, raised by NatureScot in relation to the assessment presented in **EIA Report Chapter 8 'Ornithology'** and subsequent post submission consultation process, which are addressed in this chapter.

Table 5.1 NatureScot Consultation Summary

Topic	Date of Correspondence	Contents
General Application Consultation		
NatureScot Initial Consultation Response	16 May 2025	Holding objection until further information is provided. Key issues were: • Significant impacts on Schedule 1 bird species through the siting and use of VPs; and • Significant impacts on Schedule 1 bird species by not assessing the correct or adequate data, or considering increasing cumulative impacts of the area, especially for golden and white-tailed eagles. Recommended actions were: 1. Further surveys using appropriately sited VPs to monitor breeding season performance of resident Schedule 1 birds, and flight activity of white-tailed eagle. 2. Correct population data used to model impacts on white-tailed eagle and golden eagle. 3. Correct information and assessment of the impacts on the golden eagle territory. 4. A reassessment of the cumulative impact of territory loss on the G/LAW1 golden eagle territory.
Applicant First Response to Initial Consultation Response	28 July 2025	Response to points 2, 3 and 4 of NatureScot's recommended actions. • Confirmation that population modelling will be undertaken with recommended population data for white-tailed eagle (see **New AI Technical Appendix 8.3**). Highlighting that no population modelling is necessary for golden eagle. • Request for additional information on golden eagle territory that NatureScot stated that it had access to. • Request for confirmation as to whether NatureScot's comments, derived from its review of recent satellite tag data, take into account occurring displacement effects from the Beinn Ghlas Wind Farm (i.e. by not considering habitat use within the G/LAW1 range prior to the construction and operation of the wind farm).

Topic	Date of Correspondence	Contents
		• Confirmation that further quantitative analysis of habitat loss from the G/LAW1 range will be undertaken, and request for confirmation and justification which satellite tag(s) data, date range(s) and range boundary estimate NatureScot advises should be used for analysis (see **New AI Technical Appendix (Redacted) 8.7**). • Confirmation on approach for quantification of habitat loss within range, and how to consider displacement due to operational Beinn Ghlas Wind Farm.
Applicant Second Response to Initial Consultation Response	21 August 2025	Response to point 1 of NatureScot's recommended actions. • General survey issues – consultation on VPs, recording of flightlines. Information provided shows that surveys met guidance standards. • White-tailed eagle – location of VPs in relation to perch site and influences on flight activity. Information presented shows that activity was not affected by surveyor presence, and an overview of the site usage by white-tailed eagle, including influences of Sea Eagle Management Scheme on the estate. • Red-throated diver – address the following NatureScot comments: o Spread of survey coverage during the 2023 breeding season in relation to divers; o Lack of focal VP watches over breeding red-throated diver loch in 2023. Confirmation that breeding diver, and focal diver VP watches were carried out in 2025, to alleviate NatureScot's concerns. Information presented showed that the results were consistent with those observed in 2023, showing that surveys did not affect diver behaviour, and that the assessment presented in **EIA Report Chapter 8** is appropriate. See **New Figure CAI 8.25.**
NatureScot Final Consultation Response	08 October 2025	States that the two Applicant letters have not adequately addressed all NatureScot's concerns, and therefore they maintain their Holding Objection position until the following issues are addressed: • Golden Eagle –concerns can be resolved by modelling the satellite tag data that can be obtained from Beinn Ghlas Repowering proposal (since granted planning permission in September 2026).

Topic	Date of Correspondence	Contents
		• White-tailed eagle – a further year of vantage point (VP) surveys are required, using different VPs and a better spread of watches to better understand white-tailed eagle use of the Site to produce a more reliable Collision Risk prediction. This is important because of the growing national cumulative risk. Further diver surveys carried out in 2025 were welcomed, and comments on red-throated diver relate only to 2023 surveys and perceived limitations to them.
Impacts on Schedule 1 bird species (Red-throated diver)		
NatureScot Compliance Team request for information letter	13 May 2025	Request by NatureScot Compliance Team for information on possible disturbance to Schedule 1 bird species during surveys.
Applicant Response Letter	15 May 2025	Summary of steps that were taken to avoid surveyor disturbance to breeding birds and ensure survey data was not compromised.
Second Applicant Response Letter	23 May 2025	Refutation of allegations of disturbance contained in NatureScot's initial consultation response, and further information provided to demonstrate that no disturbance would have taken place.
NatureScot Response to Applicant letters	12 June 2025	Stated that NatureScot did act with due diligence in including allegation in public document to Energy Consents Unit, and outline reasons for disagreeing with Applicant's position.
NatureScot Compliance Team response to Applicant request	21 October 2025	Confirmation upon request from Applicant that no further investigation, or action to be taken, by NatureScot's Compliance Monitoring team, regarding the allegations of disturbance to Schedule 1 birds.
Vantage Point Surveys		
Applicant email to NatureScot	05 January 2026	Outline of methodology for additional flight activity surveys, including rationale for selection of locations of new VPs, and provision of viewsheds to demonstrate visual coverage.

Topic	Date of Correspondence	Contents
Meeting with Applicant and NatureScot	08 January 2026	Applicant presentation of flight activity survey methodology and justification for VP selection. Confirmation from NatureScot that the three VPs selected are suitable for surveys. Request by NatureScot to consider a fourth VP to north of the site to increase coverage.
Applicant email to NatureScot	15 January 2026	Response to request for adding a fourth VP – demonstrating that it is not necessary, with only small gaps in coverage within the Wind Farm area, and proximity to prominent hill which may be used for perching taking note of previous NatureScot criticisms (relating to coverage of incoming flights from the known nest site if the birds use the site in 2026[8]).
NatureScot email to Applicant	30 January 2026	Stated that fourth VP would improve coverage of rotor swept area of turbine T11. Advised that if evidence can be provided that the entire rotor swept area can be seen from VP2b[9] and that a 4th VP is not practicably possible within the vicinity of the suggested grid reference, this would go some way to negate NatureScot's concerns.
Applicant email to NatureScot	09 February 2026	Confirmation that VP2b[9] does cover the rotor swept area of turbine T11. Confirmation that a fourth VP will however be added to surveys to alleviate any concerns, commencing at the start of the breeding season in February 2026. Confirmation that flight activity surveys commenced from three VPs at the start of the 2025-26 non-breeding season.
NatureScot email to Applicant	11 February 2026	Restating of request to carry out 12 months of surveys from fourth VP, stating "*If there are only six months of survey work completed at this new VP (the majority of which would be carried out within the breeding season), this could have an effect on our assessment when the data is submitted*."
Applicant letter response to NatureScot	20 March 2026	Letter and technical information provided to demonstrate that a fourth VP is not necessary. Provision of wireline graphic to demonstrate VP coverage of turbine T11. Estimation of over 92% coverage of turbine volume seen by surveyors from the three VPs. Confirmation of slight relocation of VP2b[9] in March 2026 to increase coverage around T11, demonstrated in a viewshed figure. Confirmation that Applicant plans to submit additional information in September 2026.

[8] The birds did not use this site in 2026, re-locating to the west. See further details in the 'Limitations' section.
[9] Subsequently renamed VP9.

Topic	Date of Correspondence	Contents
NatureScot email to Applicant	08 April 2026	Welcomes relocation of VP2b. Stated that "*surveying from February to August at the 4th VP could be a limitation and may result in us asking for further survey work if the results are not satisfactory when submitted. We would strongly advise that you carry out a full year of survey work at VP4 if possible"*.
		In order to provide a second opinion on the requirement for a fourth secondary VP, a review has been conducted by Avian Ecology (**New AI Technical Appendix 8.2**). This confirmed that *"Based on this review, it is considered that locations and coverage of the initial three secondary VPs conformed with the relevant NatureScot bird survey guidance and were adequate in permitting the recording of appropriately representative bird flight activity data within the flight activity survey area to inform collision risk modelling. Hence, it is also concluded that the introduction of the 4th VP was not necessary in order to meet these requirements."*
Golden Eagle and White-tailed Eagle Analyses		
Applicant email to NatureScot with reports	25 June 2026	Provision of an updated Golden Eagle Habitat Assessment and White-tailed Eagle Population Viability Analysis (PVA). Confirmation that these will be part of The Additional Information submission, with a request for NatureScot to review prior to this.
NatureScot email to Applicant	21 July 2026	• White-tailed eagle PVA – *"We are unable to comment on the results of the PVA until we have a full year of VP survey data and Collision Risk Modelling results. However at this stage we are happy with the methodology that has been used."* • Golden Eagle Habitat Assessment - confirms acceptance of methodology. NatureScot consider satellite tag and GET Model results to determine habitat loss, stating *"It is likely that the true figure sits somewhere between these values",* and conclude that *"it is likely that this golden eagle territory could become unviable and may result in territory abandonment".* • Noted that roost analysis carried out for Beinn Ghlas Repowering suggests that there are transient, occasional and multi-use roosts within the Proposed Development site and potential barrier zone, suggesting that loss of usage may result in the territory changing shape or losing ground, potentially resulting in unviable territory or abandonment.

Topic	Date of Correspondence	Contents
Applicant email to NatureScot with Golden Eagle Roost Analysis report	21 August 2026	Applicant produces roost analysis which finds that the Revised Proposed Development is unlikely to result in a significant loss of roosts within the range.
Meeting with Applicant and NatureScot	27 August 2026	Agenda: • The use of satellite data and GET modelling in habitat assessments. • Discussion of the Corr Chnoc habitat assessment (see **New AI Technical Appendix (Redacted) 8.7**). • Discussion of the Corr Chnoc roost analysis (see **New AI Report Confidential Technical Appendix 8.8**). Summary of the golden eagle habitat assessment and roost assessment findings by Dr Alan Fielding, and demonstration of why satellite tag data overrides GET model outputs, and why golden eagle territory is unlikely to become unviable, based on habitat loss and roost usage. Apparent broad agreement from NatureScot in conclusions.
Follow up summary email from Applicant; after meeting with Applicant and NatureScot	23 September 2026	Summary of overall discussion from 27 August 2026. The email recorded that: • NatureScot confirmed it now possesses all the information needed to make a decision on golden eagle. • Subject to formal review, NatureScot indicated they were open to concluding that the Revised Proposed Development would not result in territory abandonment for the golden eagle pair.

RSPB Scotland

5.4.6 RSPB Scotland, in their application consultation dated 31 March 2025 made the following comments (responses to these are provided in the subsequent paragraphs):

- '*RSPB Scotland highlighted concerns regarding Annex 1 & Schedule 1/1A/A1 White-tailed Eagle at Scoping. The Confidential Appendices (**EIA Report Volume 5, Confidential Appendices, Confidential Figures C8.14-C.8.17**) indicate that Vantage Point surveys recorded heavy use of the site by White-tailed Eagles and show the presence of a White-tailed Eagle breeding site in close proximity to the turbine array. Note also that the Applicant's Vantage Points were located within the site boundary, which is contrary to NatureScot guidance'.*

5.4.7 These concerns have been addressed through the responses to NatureScot relating to the vantage point locations, and additional surveys carried out. It should be noted that the original vantage point locations were all at the edge of, or outside of the turbine layout, which is the relevant area in terms of assessing collision risk, rather than the application Site Boundary. The re-located vantage points are all outside of the turbine layout, placed around the application Site Boundary (see **New Figure AI 8.11**).

- RSPB further commented that: *'The Applicant states (**Volume 1, Chapter 8 'Ornithology', Para. 8.11.2**) that a White-Tailed Eagle Management Plan (WEMP) would be created to mitigate potential impacts from the Proposed Development on White-tailed Eagle; however, a draft version has not been provided for stakeholder consideration at Application. Presently, RSPB Scotland does not consider that adequate information on mitigation of this impact has been supplied by the Applicant'.*

5.4.8 It is considered that both the **EIA Report** (and **AI**) assessments demonstrate no significant effects on white-tailed eagle but nevertheless the Applicant will produce a WEMP post consent to consider emerging best practice measures as appropriate and is willing to support the joint NatureScot and RSPB sea eagle tagging project. This would be in addition to standard measures such as carrion searches and removal of carcasses from within the Site.

- RSPB further commented that: *'Exact locations and extents have not been given (see further comments under oHMP below), but much of the proposed on-site peatland restoration activity and bracken management is proposed within or very close to the turbine array (**Volume 2, Chapter 9, Figure 9.11**). While these activities are positive, they risk making the wind farm area more attractive to White-tailed Eagle prey species; increasing prey availability close to turbine infrastructure for White-tailed Eagles and other raptors. This is somewhat at odds with outline proposals to conduct fallen stock/carrion searches within 200m of turbine infrastructure intended to reduce the risk of White-tailed Eagle draw-in (**Volume 1, Chapter 8 'Ornithology', Para. 8.11.2**)'.*

5.4.9 It is considered that the scale of any bracken removal will not make any material difference to the behaviour of foraging white-tailed eagles within the Site. oHMP measures will be finalised post consent but it is considered that the overall benefits to biodiversity of peat restoration and bracken control outweigh any perceived increase of collision risk to white-tailed eagles.

- RSPB further commented that: *'Given the ongoing success and expansion of White-tailed Eagle populations in Scotland, their willingness to nest in commercial forestry plantations and their poor turbine avoidance behaviour, RSPB Scotland recommends that a draft WEMP is submitted for consideration as Further Environmental Information during the*

EIA process prior to any consenting of the Proposed Development. We also recommend that a commitment to active, ongoing monitoring and mitigation for White-tailed Eagle activity on site is stipulated in the Habitat Management Steering Group (HMSG)'s terms of reference'.

5.4.10 As stated above, a draft WEMP will be produced for consultation and agreement post consent. This will include best practice measures such as carrion removal, post-consent monitoring including supporting the joint NatureScot and RSPB sea eagle tagging project.

Assumption and Limitations

Assumptions

The Revised Proposed Development

5.4.11 Changes from the 'maximum design' (or otherwise precautionary) scenario for assessment presented in the **EIA Report Chapter 8 'Ornithology'** are listed below. All other design elements remain the same as the Proposed Development.

- Reduction in turbine layout from up to 12 turbines to up to 11 turbines, with a maximum tip height of 200 m and rotor diameter of 162 m (unchanged from the Proposed Development); and
- Reduction in extent of connecting access tracks from 15,540 m of new track, to 12,176 m.

Mitigation by Design

5.4.12 The removal of one turbine and associated access track benefits ornithological features by reducing collision risk and the area of habitat loss and potential displacement.

Embedded Mitigation Measures

5.4.13 There is no change from the corresponding section in the **EIA Report Chapter 8 'Ornithology'** (**para 8.5.4**).

Habitat Management Plan (HMP)

5.4.14 There is no change from the corresponding section in the **EIA Report Chapter 9 'Ecology' (Technical Appendix 9.6).**

Limitations

5.4.15 No limitations to the updated baseline surveys or assessment presented within this chapter have been identified.

5.4.16 With regard to the Vantage Point and Viewshed issues raised by NatureScot in correspondence referred to in **Table 5.1** (NatureScot email on 30 January 2026) which stated that a "*fourth VP would improve coverage of rotor swept area of turbine T11".* They advised that if "*evidence can be provided that the entire rotor swept area can be seen from VP2b*[10] *and that a 4th VP is not practicably possible within the vicinity of the suggested grid reference, this would go some way to negate NatureScot's concerns*".

[10] Re-named VP9.

5.4.17 Evidence was provided to NatureScot that VP2b (VP9) does cover the rotor swept area of turbine T11. Nevertheless, surveys from a fourth VP (VP11) were undertaken, commencing at the start of the eagle breeding season in February/ March 2026. This was despite the fact that over 92% of the turbine volume was already covered from the three existing VP locations (VP8, VP9 and VP10)[11].

5.4.18 NatureScot also requested the addition of a fourth VP on the basis that the white-tailed eagle pair may nest in a historic location north of turbine T11. In their view, the fourth VP would be better placed to capture flight activity from this historic nest site. However, this concern has also been allayed as we now know that the pair nested over 2 km to the west, meaning that there has not been a concentration of flight activity in the area of turbine T11, based on the 2025 to 2026 survey data.

5.4.19 It is therefore considered that the six months of additional surveys from VP11 have not materially changed the collision risk analysis for white-tailed eagle, which has in fact reduced between 2022 to 2024 and 2025 to 2026. It is also considered that continuing the surveys from VP11 for an additional 6 months is not proportionate, nor likely to significantly alter the survey results.

5.4.20 Given the discussion with NatureScot on this topic, the Applicant commissioned a peer review of the secondary vantage point selection, undertaken by Avian Ecology (Thomas Goater, (Technical Director) (**AI Technical Appendix 8.2**). The review concludes: *"Based on this review, it is considered that locations and coverage of the initial three secondary VPs conformed with the relevant NatureScot bird survey guidance and were adequate in permitting the recording of appropriately representative bird flight activity data within the flight activity survey area to inform collision risk modelling. Hence, it is also concluded that the introduction of the 4th VP was not necessary in order to meet these requirements*."

5.4.21 In conclusion, it is considered that the evidence provided is sufficient and appropriate, for informing the EIA process.

5.5 Baseline conditions

Current Baseline

5.5.1 This section updates the baseline conditions for white-tailed eagle, golden eagle and red-throated diver using the survey data derived from post-EIA surveys in 2025 and 2026 referenced in Paragraph 5.3.4.

5.5.2 As no issues were raised by consultees for any other ornithological features which were considered in the 2024 **EIA Report Chapter 8 'Ornithology'**, these have been scoped out of this assessment. It is considered that the conclusions pertaining to all other ornithological features presented in the 2024 **EIA Report Chapter 8 'Ornithology**' remain valid.

Flight Activity Surveys

5.5.3 The flight activity surveys recorded all target species' flight activity within proximity to proposed turbine locations. These data have been used in the collision risk modelling. The flights used included those within the 'Collision Risk Analysis Area' (CRAA) (i.e. the area to be occupied by turbines, together with a 500 m buffer).

[11] Review undertaken in **New AI Technical Appendix 8.2.**

5.5.4 For the EIA surveys **(EIA Report Chapter 8, 'Ornithology')** flight activity surveys were undertaken across six VPs **(EIA Report, Figure 8.2)** with only flights from VPs 1-4 used for collision risk modelling, with VPs 5 and 6 falling entirely outside of the CRAA after a series of layout updates.

5.5.5 Four new VP locations (VPs 8 to 11) were utilised in the production of this analysis, as summarised in **Table 5.2.** The addition of VP11 occurred in February 2026 which is one month prior to the commencement of the eagle breeding season. Data from all these VPs were used for collision risk modelling (i.e. data from VPs 8 to 10 were used for the non-breeding and breeding season, with data from VP 11 supplementing the breeding season[12]).

5.5.6 Valid survey effort is detailed in **Table 5.2** and full details of flight activity surveys are contained in **New AI Report Appendix 8.1.**

Table 5.2 Summary of total hours of valid survey per VP in each season

Period	VP8	VP9	VP10	VP11
2025/2026 non-breeding season (September to February).	36	36	36	6
2026 breeding season (March to August).	36	36	36	36

5.5.7 Flight activity of 14 target species[13] was recorded over the course of surveys (from VPs 8-11), with collision mortality risks for the Revised Proposed Development estimated using the NatureScot CRM using the same method as in the **EIA Report Chapter 8, 'Ornithology'** (Band *et al*., 2007 and Band 2024[2]). The exceptions to this were pink-footed goose, lapwing, golden plover, snipe, red-throated diver, osprey and merlin (**Table 5.3**) because no 'at-risk' flights were recorded for these species, i.e., none occurred within 500 m of a proposed turbine location (within the CRAA, **New Figure AI 8.11**); at rotor height; and within a surveyor's 2 km viewshed (all three criteria required for a flight to be 'at-risk' to the Revised Proposed Development).

5.5.8 To provide a comparison with the 2022 to 2024 baseline data used in the **EIA Report Chapter 8 'Ornithology'**, activity rates (bird secs per hour) have also been presented in **Table 5.3**.

Table 5.3 Target species recorded and total number of flights recorded during flight activity surveys, 2025-2026

Species	Total number of flightlines recorded	Total number of birds recorded	Total bird seconds recorded	Bird secs / hr (Revised Proposed Development)	Bird secs / hr (Proposed Development)
Pink-footed goose	*1*	*45*	*2700*	*10.47*	*166.90*
Whooper swan	3	19	2310	8.95	30.65

[12] VP 11 survey data were not included in the non-breeding season CRM as only six hours were conducted.
[13] Target species as defined in NatureScot 2025a[3], remain unchanged from 2024 EIAR.

Species	Total number of flightlines recorded	Total number of birds recorded	Total bird seconds recorded	Bird secs / hr (Revised Proposed Development)	Bird secs / hr (Proposed Development)
Black grouse	1	1	90	0.39	0.15
Lapwing	*10*	*13*	*242*	*0.94*	*0.00*
Golden plover	*1*	*2*	*60*	*0.23*	*0.55*
Snipe	*2*	*2*	*26*	*0.10*	*0.04*
Great black-backed gull	4	6	944	3.66	0.00
Herring gull	34	116	12098	46.89	17.61
Red-throated diver	*1*	*1*	*115*	*0.45*	*3.12*
Osprey	*1*	*1*	*31*	*0.12*	*0.00*
Golden eagle	26	34	4672	18.11	14.88
Hen harrier	31	32	1718	6.66	10.43
White-tailed eagle	41	50	9053	35.09	41.38
Merlin	*1*	*1*	*12*	*0.05*	*0.18*

5.5.9 Predicted seasonal and mean annual collision rates are presented in **Table 5.4**. Further details on input parameters, methods, and outputs are presented in the **New AI Technical Appendix 8.4**. Full details of recorded target species flight activity are presented in **New AI Technical Appendix 8.1**.

5.5.10 **Table 5.4** presents collision risk modelling outputs for the updated 11-turbine Revised Proposed Development alongside the worst-case 12-turbine Proposed Development for comparison (using the 2025-2026 data). Additionally, for further comparison, **Table 5.5** presents the original outputs for the Proposed Development using the 2022-2024 data.

Table 5.4 Collision Risk Modelling Outputs 2025-2026, Revised Proposed Development & Proposed Development

Species	Avoidance Rate	Revised Proposed Development				Proposed Development			
		2025/26 NBR	2026 BR	Annual	Years per Collision	2025/26 NBR	2026 BR	Annual	Years per Collision
Whooper swan	99.5%	0.04219	0	**0.04219**	23.70249	0.043347	0	**0.043347**	23.06938
Black grouse	98.0%	0.000858	0	**0.000858**	1165.727	0.000881	0	**0.000881**	1134.526
Great black-backed gull	99.5%	0	0.014733	**0.014733**	67.87411	0	0.015197	**0.015197**	65.8017
Herring gull	99.5%	0	0.011642	**0.011642**	85.89426	0	0.012009	**0.012009**	83.27164
Golden eagle	99.0%	0.055677	0.028903	**0.08458**	11.82312	0.057397	0.029737	**0.087133**	11.47664
Hen harrier	99.0%	0.000151	0.003077	**0.003229**	309.7255	0.000155	0.003174	**0.00333**	300.3231
White-tailed eagle	95.0%	0.050773	0.244833	**0.295606**	3.382886	0.052341	0.251894	**0.304235**	3.286934
	98.0%	0.020309	0.097933	**0.118242**	8.457215	0.020936	0.100758	**0.121694**	8.217335
	99.0%	0.010155	0.048967	**0.059121**	16.91443	0.010468	0.050379	**0.060847**	16.43467

Table 5.5 Collision Risk Modelling Outputs 2022-2024, Proposed Development

Species	Avoidance Rate	Mean BR	Mean NBR	Mean Annual	Years per Collision
Arctic skua	99.5%	0	0.000001	0.000001	1,346,903
Black grouse	98.0%	0.0002	0.0010	0.001	853
Curlew	98.0%	0	0.0058	0.006	172
Golden eagle	99.0%	0.0106	0.0048	0.015	65
Greylag goose	99.8%	0	0.0355	0.035	28
Hen harrier	99.0%	0.0288	0.0002	0.029	34
Herring gull	99.5%	0.0306	0.1817	0.212	4.7
Merlin	98.0%	0.00001	0.0015	0.002	649
Peregrine falcon	98.0%	0.0018	0.0023	0.004	240
Pink-footed goose	99.8%	0	0.0011	0.001	937
Red-throated diver	99.5%	0.0089	0	0.009	112
Red kite	99.0%	0	0.0001	0.00006	16,011
White-fronted goose	99.8%	0	0.0004	0.0004	2363
White-tailed eagle	95.0%	0.5359	0.1075	0.643	1.6
Whooper swan	99.5%	0	0.2137	0.214	4.7

Golden Eagle

5.5.11 The Site is within the golden eagle range G/LAW1, which was occupied by a satellite tagged female between February 2021 and April 2025. This tagged female was killed by an incoming female in 2025 which replaced her as part of the territorial pair. The territorial range of G/LAW1 includes a variety of breeding sites, all more than 2 km from the study area (most recently over 5 km). The range includes the operational Beinn Ghlas wind farm within it, with the Revised Proposed Development itself being towards the north-west edge of the main range boundary.

5.5.12 Golden eagles were recorded in flight throughout the 2025-2026 baseline survey period, (**New Figure AI 8.12**). Flights occurred most commonly above the higher ground and ridges to the southeast of the Wind Farm Area, rather than above the Wind Farm Area itself (as previously noted during the 2022-2024 baseline surveys (**EIA Report Figure 8.3**)).

5.5.13 An analysis of the satellite tracking data in relation to the Wind Farm Area has been undertaken (Fielding 2026, included as **New AI Appendix (Redacted) 8.7**). Given this information, the range extent and usage within G/LAW1 is very well understood.

White-tailed Eagle

5.5.14 The resident breeding pair remained within the study area but relocated its nest site c. 2.3 km to the west of the old site in 2025 and 2026 (see **New Figure CAI 8.23** and **New Figure CAI 8.24**). One chick was reported in May 2026 (NatureScot via estate staff).

5.5.15 Much of the flight activity recorded during the 2025-2026 baseline period was associated with the breeding pair, although individuals were recorded widely across the Wind Farm Area throughout the year, comprising a mixture of breeding adults, sub-adults and non-breeding individuals.

5.5.16 The recorded flight activity during the 2025-2026 baseline period was slightly lower relative to the original surveys spanning from 2022-2024 (see **Table 5.3**). This is likely explained by the following two factors:

- The distance of the nest site from the turbine risk area (CRAA) meaning that flights were not as concentrated within this area; and
- A lower proportion of flights at 'risk height' due to birds flying higher through the CRAA, which is also related to the distance of the nest site from the CRAA.

Divers

5.5.17 A red-throated diver pair was confirmed to have bred in 2025 on the same lochan as in 2023 (see **EIA Report Figure C8.12** and **New Figure CAI 8.25**).

5.5.18 Focal loch surveys in 2025 (June and July) recorded 27 flights predominantly orientated away from the Wind Farm Area (**New Figure CAI 8.25**). One flight was recorded over the Wind Farm Area but was not thought to involve one of the breeding pair.

5.5.19 This information was presented to NatureScot in the Applicant's Second Response (21 August 2025), who accepted (in their final response dated 08 October 2025) that the data "*do clarify the routes they take when on feeding flights and that they do go primarily west and don't go southwest towards Loch Feochan, which would potentially have brought them closer to the turbine array*".

5.5.20 These findings were consistent with the scenario that was assessed in **EIA Report Chapter 8 'Ornithology'**, and for this reason, it can reasonably be concluded that the predicted effects on red-throated diver in the is unchanged, and so the species is scoped out of further assessment in this AI Chapter.

Future Baseline

5.5.21 The future baseline conditions presented in the **EIA Report Chapter 8 'Ornithology'** chapter remain valid.

5.6 Assessment of potential effects

Identified Impact Pathways

5.6.1 The impact pathways remain the same as in **EIA Report Chapter 8 'Ornithology'**. For the Important Ornithological Feature (IOFs) under consideration, the relevant impact pathways are listed below, with the remaining impacts presented for the Proposed Development assessment scoped out of this AI chapter.

- Collision mortality for white-tailed eagle – the risk of mortality resulting from collision or interaction with turbines during operation; and
- Disturbance/displacement for golden eagle – the avoidance of birds from the area occupied by development infrastructure and working areas and therefore the further indirect loss of habitats during operation.

Golden Eagle Impact Assessment

Construction Phase

5.6.2 As described in **EIA Report Chapter 8 'Ornithology'**, there are no known nests, or crags or woodland habitat suitable for nesting that would be lost to or disturbed by the construction of the Revised Proposed Development. Therefore, construction impacts on breeding golden eagle have been scoped out of this chapter. Any unforeseen impacts would be minimised by the Bird Disturbance Management Plan (BDMP) through the use of an Ecological Clerk of Works (ECoW) to ensure that any golden eagle breeding attempt is not disturbed due to construction activities.

5.6.3 An analysis of roosting behaviour within the G/LAW1 range derived from satellite tagging data has been undertaken (Fielding 2026, **New AI Technical Appendix (Confidential) 8.8**). This found that, contrary to previously held beliefs (before satellite tagging), golden eagles use many roost sites within their range, rather than a small number of preferred locations. Although there were 195 roost sites identified within the range, only a small number of these would potentially be impacted by the Revised Proposed Development. It was found that these potentially impacted roosts were infrequently used during the year. It is therefore considered very unlikely that roosting golden eagles would be affected by construction activities.

Operational Phase

<u>Displacement and Barrier Effects</u>

5.6.4 This section addresses NatureScot's requests outlined in their consultation responses (**Table 5.1**).

5.6.5 An analysis of satellite-tag data from the G/LAW1 territory has been undertaken by Dr Alan Fielding and included as **New AI Technical Appendix (Redacted) 8.7**. The data analysed was from the territorial female golden eagle in G/LAW1 which was tagged between 2021 and 2025. The report states that "*the Beinn Ghlas home range is unusual in that it is the only home range, out of more than a hundred with tagged range holders, in which there is an operational wind farm in the centre of the range and this wind farm pre-dates the range holders, i.e. the turbines were in place when the current range holders settled in the range*". The analysis presents visual representations of the tag data which demonstrated that most of the activity took place in the area around the historic nest sites (occupied before 2018) and the current nest site used since 2019, all to the east of the Wind Farm Area. The closest record of the tagged bird to a Beinn Ghlas turbine was within 100 m.

5.6.6 NatureScot's position with regard to collision risk versus displacement impacts from wind farms states: "*evidence suggests the principal effect to golden eagles from wind farms is displacement as eagles tend to avoid windfarms*"[14].

5.6.7 There is no current NatureScot guidance on how to assess either the extent, or significance of lost 'good' golden eagle habitat[15] arising from a wind farm development. In the absence of NatureScot guidance, **New AI Technical Appendix (Redacted) 8.7** describes the approach taken to assess the area of good golden eagle habitat lost following wind farm construction and its possible significance. Please refer to this report for full details.

5.6.8 The analyses show that the Beinn Ghlas home range has a large, elongated main area plus three small satellite areas (**New AI Technical Appendix (Redacted) 8.7**). The area of the 95% Percent Volume Contour (PVC) home range is 5,552 ha.

5.6.9 To estimate the impact of the Revised Proposed Development using tag data, it was assumed that an average displacement distance of 300 m from the proposed turbine towers was appropriate. A small area of golden eagle habitat, inside this 300 m distance (or 'turbine exclusion zone'), has already been lost to forest cover in the southwest corner. The exclusion zone is 375 ha, comprising 357 ha of open habitat, of which 259 ha is good eagle habitat (derived from the GET model).

5.6.10 The satellite tag data show that the female made use of habitat west of the turbine exclusion zone which could be an additional loss. Given the position and orientation of the turbines it is probable that the Revised Proposed Development could create a barrier to habitat north west of the proposed turbines. This creates a potentially larger exclusion zone of an additional 325 ha.

5.6.11 Analysis showed 3.3% of daytime records were within the turbine exclusion zone out of within the home range. Including the extended exclusion zone, there were 4.3% of the daytime tag records.

---

[14] NatureScot Position Statement in relation to: Mitchell, L and Masden, E. (Environmental Research Institute) Cumulative collision impact modelling on bird species of Caithness and Sutherland Peatlands Special Protection Area (SPA) – within the context of the Proposed World Heritage Site. NatureScot Research Report 1350. NatureScot Research Report 1350 - Cumulative collision impact modelling on bird species of Caithness and Sutherland Peatlands Special Protection Area (SPA) – within the context of the Proposed World Heritage Site | NatureScot

[15] Based on the GET model, a GIS tool that can be used to predict the habitat use of golden eagles. The model ranks topographical habitat by its likely use by golden eagles and attributes a use-class between 1 and 10 for each 50 m x 50 m pixel area within Scotland, with 1 being the lowest and 10 the highest use-class (or GET score). GET 6-10 indicates preferred habitat.

5.6.12 Thus, whilst it appears that the Wind Farm Area may support good golden eagle conditions, it is at the outer part of the G/LAW1 breeding territory and can therefore be considered as being of relatively low importance in terms of foraging and obtaining sufficient food for successful breeding within the G/LAW1 range.

5.6.13 In order to assess the additional losses from the proposed Beinn Ghlas Repowering and Cruach Clenamacrie developments a 300 m buffer was constructed for each using the same method as that used for the Revised Proposed Development. In combination, the three proposed developments exclude 4.6 % of the home range points.

5.6.14 No additional habitat losses resulting from turbine barriers were included as the Cruach Clenamacrie development overlaps the edge of the range and the Beinn Ghlas Repowering development is in the same location as the existing Beinn Ghlas turbines.

5.6.15 However, if the barrier zone, west of the Revised Proposed Development, is included this increases to 5.6% of the home range points. A cumulative 5.6% loss of the range is considered extremely unlikely to result in range abandonment (**New AI Technical Appendix (Redacted) 8.7**).

5.6.16 In terms of potential loss of roosting habitat, the detailed analysis presented **in New AI Technical Appendix (Confidential) 8.8**, concluded that the overall data, combined with informed biological interpretations, demonstrates that the Revised Proposed Development is unlikely to result in a significant loss of roosts and subsequent range abandonment. Tagging data suggest the importance of one roost within the extended turbine exclusion zone (#62) has already been degraded significantly by the local presence of a white-tailed eagle pair and this roost is no longer of much value to the G/LAW1 range. In other words, the roost was used frequently for a period after white-tailed eagles moved in (to assert their presence in an attempt to put them off), however, once they were established, the golden eagles use of this roost declined. Additionally, although another roost (#69) is within the turbine exclusion zone, it is over 240 m from the closest turbine and flight activity shows the majority of approaches are from the south and southeast. As such, it is unlikely the Revised Proposed Development would result in the complete loss of this roost. This conclusion is supported by roost #31 which is in open habitat and has been used on five nights despite being 300 m from the closest operational Beinn Ghlas turbine.

5.6.17 Overall, although some potential foraging habitat and roost sites within the G/LAW1 range would be lost for territorial, and to a degree, non-breeding individuals, the presence of the Revised Proposed Development turbines along with the other wind farm developments within G/LAW1 is unlikely to affect the viability of the territory. In addition, the productivity of the G/LAW1 territory is historically consistently low (as indicated by ARSG data).

5.6.18 On this basis, an impact of permanent, **negligible** magnitude within the context of the NHZ 14 population is predicted.

5.6.19 **Significance of Effect:** the effect on the Argyll golden eagle population as a result of operational displacement is considered to be **negligible** and therefore **not significant** in the context of the EIA Regulations. This is unchanged from the conclusions reached in **EIA Report Chapter 8 'Ornithology'**.

Collision Risk

5.6.20 Collision impacts on golden eagle have been scoped out of this chapter (para 5.6.1). The evidence presented in Fielding *et al.* (2021; 2022; 2023) suggests that the general risk of

collisions to golden eagles is low due to their strong avoidance behaviour of turbines. This is also NatureScot's stated position[14].

White-tailed Eagle Impact Assessment

Construction Phase

5.6.21 Construction impacts on breeding white-tailed eagle have been scoped out of this chapter. The breeding pair are now nesting well outside of the recommended disturbance buffer (Goodship & Furness, 2022). Any unforeseen impacts would be minimised by the BDMP through the use of an ECoW to ensure that any white-tailed eagle breeding attempt is not disturbed due to construction activities, as stated in **EIA Report Chapter 8 'Ornithology'**.

Operational Phase

Displacement and Barrier Effects

5.6.22 Displacement and barrier effect impacts on white-tailed eagle have been scoped out of this chapter. The conclusions set out in **EIA Report Chapter 8 'Ornithology'** are unchanged.

Collision Risk

5.6.23 The updated CRM using 2025/ 2026 survey data predicts an annual collision rate of 0.296 for the Revised Proposed Development, which equates to approximately one bird every 3.4 years (**Table 5.4**) (using the NatureScot rate of 95% avoidance). The predicted seasonal collision rates ranged from 0.25 collisions for the 2026 breeding season, to 0.05 collisions for the 2025/ 2026 non-breeding season.

5.6.24 The outputs for the Revised Proposed Development at the full range of avoidance rates referenced below are:

Revised Proposed Development

- 95%: 0.296
- 98%: 0.118
- 99%: 0.059

5.6.25 The original CRM output in the **EIA Report Chapter 8 'Ornithology'** using 2022-2024 survey data predicted a mean annual collision rate of 0.643 for the Proposed Development, which equates to approximately one bird every 1.6 years (**Table 5.5**) (using the NatureScot rate of 95% avoidance). For comparison, the CRM output using 2025/26 survey data was also assessed for the Proposed Development, which predicted an annual collision rate of 0.304, equivalent to approximately one bird every 3.3 years (**Table 5.4**).

5.6.26 A comparison was undertaken to compare the 2022-24 baseline data with the later 2025-26 data. Mean total bird-seconds were calculated for each height band for the different time periods. The overall average for each flight event was very similar (75.3 bird-seconds for 2022 – 2024, and 79.4 bird-seconds for 2025/2026) but there was a difference when comparing time 'at-risk' (i.e. individual height band data for all flights); which was 73% at PCH for 2022 – 2024 versus 48% at PCH for 2025/ 2026. This was due to greater proportions of time in the height band above rotor height in 2025/ 2026 (31%) compared with 2022 – 2024 (20%). This, in part, accounts for the reduction in collision risk associated with the Revised Proposed Development. The reason for this is likely due to the re-location of the nest site to a location further from the

CRAA meaning that low altitude 'at risk' flights associated with the old nest did not occur during this time period.

Scottish White-tailed Eagle Collision Risk and Use of Avoidance Rates in Collision Risk Modelling

5.6.27 As stated by Band 2024[16], there are inherent uncertainties within the collision modelling process, such as uncertainty or variability in flight activity data: uncertainty due to the limitations of the collision model, including the variability of bird dimensions and flight speed; the simplification in shape of a bird and turbine blades: and over-precautionary avoidance rates. Band 2024 goes on to state: *"the collision risk estimate should conclude with a table showing potential collision mortality using a range of assumed avoidance rates. The text relating to this table should point to any evidence from existing post-construction monitoring on the respective or similar bird species which might indicate what levels of avoidance are best supported by evidence".*

5.6.28 The "avoidance rate", which is a species-specific percentage value, is applied at the end of the process to account for the proportion of birds that will avoid colliding with a turbine, either by being displaced from the wind farm area, avoiding individual turbines, or taking other evasive action near a turbine rotor. For white-tailed eagle, NatureScot have set the avoidance rate value at 95%, which is based on "*Sufficient evidence from flight behaviour and collision monitoring studies in Norway for vulnerability to collisions; see May et al. (2011)*". This is significantly lower than NatureScot's default avoidance rate of 98% and is not an accurate representation of the real risk posed to the species which has been examined in two reports, included as **New AI Technical Appendices 8.5** and **8.6**.

5.6.29 **New AI Technical Appendix 8.5** ('*An investigation into the possible cumulative impact of additional mortality on the Scottish White-tailed Eagle Population'*) was authored by Dr Alan Fielding and Associate Professor Matthew Geary and examines cumulative white-tailed eagle mortality concerns in the context of Scottish Onshore wind farm developments. The analysis is detailed, wide ranging and comprehensive. Key findings include:

- The current Collision Risk Assessment (CRA) methodology (i.e. using the Band model), and published CRA results, significantly overestimate the collision risk to the Scottish white-tailed eagle. In what is believed to be the most detailed and robust Scottish case study in existence, recorded collisions occurred at only 7% of the rates predicted by the CRA methodology; a 93% reduction.
- The 93% reduction in recorded collision relative to CRA predictions is consistent with analysis of the real national population growth rate, which is only possible if historic collision rates have not been significant. If historic predicted collision rates were accurate, accounting for population growth, the population impact on white-tailed eagles should be much larger than currently recorded. However, as no population-level impact has been observed, as accepted by NatureScot, and recorded fatalities from wind farms have been

[16] Band, W. 2024. Using a collision risk model to assess bird collision risks for onshore wind farms. NatureScot Research Report 909.

small[17], the number of predicted collisions produced by Scottish EIA assessments has to be a significant overestimate.

- The significant and concurrent expansion of white-tailed eagles and wind turbines across Scotland. Using mainland Argyll as a case study, the report finds the local population grew by c. 500% over a 10-year period to 2025 during which time the total number of operational turbines rose 35%. It concludes there is no evidence that the increasing number of turbines is restricting the White-tailed Eagle's expansion.
- Between 2019 and 2025, 40 white-tailed eagles were translocated to England in NatureScot sanctioned programmes. This number is far in excess of the recorded number of turbine collisions, recorded over a much longer period of time, and demonstrates the robustness of the Scottish population which continues to grow on the 'zero mortality' population growth scenario set out in Sansom *et al* 2016[18].
- Data were extracted from 114 CRAs in the public domain; 48 of the 114 CRAs estimated a white-tailed eagle collision probability. There was great inconsistency in the bird and turbine metrics used, even for apparently very similar turbines. In many cases rotation speed was too fast, sometimes faster than the turbine specifications. Overall, these CRAs entered values into the collision model which inflated the collision probability.
- More accurate and pragmatic assessments of risk, which recognise the many limitations of the current CRA method, are needed in order to accurately assess the risks posed to the Scottish white-tailed eagle population as current cumulative collision predictions cannot be reconciled with the numerical and spatial expansion of the species nor it's observed population growth.
- Based on the report's analysis, even increasing the white-tailed eagle avoidance rate to 97.5% or 98% would still result in precautionary assessments which are likely to overestimate collision risk using existing CRA methods.

5.6.30 Whereas **New AI Technical Appendix 8.5** explores white-tailed eagle trends specific to Scotland, **New AI Technical Appendix 8.6** reviews the evidence referenced by NatureScot in its published Avoidance Rate table. To investigate the differences in estimated correction factors and advice, the report summarises the findings from studies at Smøla used to quantify white-tailed eagle avoidance rates and evaluates the appropriateness of the avoidance rates advocated by relevant parties, for use in Scottish onshore wind farm projects. Please refer to **New AI Technical Appendix 8.6** for full details and report references, with the following paragraphs providing a summary of the key information.

5.6.31 Smøla Island has a high density of breeding white-tailed eagles, which have been well monitored. Studies indicated that the breeding population has been reasonably stable in the period 1998–2023, with a mean of 45 territories. There have been no obvious long-term changes in reproductive output or number of active territories, albeit it appears that the distribution of territories has changed since wind farm construction. From 2005–2023,

[17] Freedom of Information Request, Deaths of Birds of Prey in Scotland from windfarms (NS ref. SIR178089/A4868054), 18 December 2024. https://www.nature.scot/doc/freedom-information-request-deaths-birds-prey-scotland-windfarms

[18] Sansom, A., Evans, R.J. & Roos, S. 2016. Population and future range modelling of reintroduced Scottish White-tailed Eagles (Haliaeetus albicilla). Scottish Natural Heritage Commissioned Report No. 898. (AP05.11).

monitoring found a total of 133 white-tailed eagles killed by collision with turbine blades at the Smøla wind farm.

5.6.32 Telemetry studies and risk assessments were carried out on 37 tagged white-tailed eagles at the Smøla wind farm. The results indicated a regular seasonal pattern of movements as both sexes disperse in the summer but return to an area close to their natal site in winter/early spring. It was highlighted that spring is when most collision fatalities have been recorded, with two thirds of all collisions occurring from March to May.

5.6.33 An attempt at calculating collision risk and avoidance rate using the data from the telemetry studies was undertaken in 2008[19]. No methodology was provided, but a summary did state that preliminary analysis of satellite tagged birds' distribution estimated an overall annual mean "avoidance rate" of 95% (ranging from 100% most of the year, down to 70% in the period March to May), although the authors did highlight that there are "*many uncertainties regarding these calculations"*, and that "*More sophisticated models, such as the Band Model should be tested out."* Thus, the avoidance rates estimated may not have been compatible with the Band model methodology.

5.6.34 Subsequently, two studies were undertaken to back-calculate the avoidance rate for use in the Band CRM; one using VP survey data combined with carcass (i.e. recorded collision) monitoring, published in 2010 and the second using satellite telemetry data from 28 subadult individuals and recorded mortality, published in 2011. Thus, the studies derived avoidance rates from back-calculations of the Band CRM and are therefore theoretically applicable for use in Scottish onshore wind farm projects, being similar to exercises carried out for other species.

5.6.35 Using the VP and collision monitoring derived data, this resulted in an average correction factor (avoidance rate) of 95.8%. However, this was based on spring (March to May) data only, which was the time of year with peak flight activity and is therefore likely to have resulted in an avoidance rate which is unrealistically low.

5.6.36 The subsequent satellite telemetry and mortality monitoring derived data, produced a single year-round correction factor (avoidance rate) of 97.5%, or 98% as referenced in the abstract of May *et al.* (2011[21]). This 2011 study, which NatureScot references in its published Avoidance Rate table, categorically does not recommend 95%.

5.6.37 In summary, the two studies undertaken at Smøla for determining a correction factor / avoidance rate specifically for use in the Band model, have derived different mean annual rates: 95.8% from VP data (May *et al.* 2010[20]) and 98% from satellite telemetry data (May *et al.* 2011[21]), both of which are above the 95.0% avoidance rate advised by NatureScot.

5.6.38 As noted previously, the 95.0% rate seems to stem from preliminary analysis by Bevanger *et al* (2008)[19] which was noted by the authors to contain 'many uncertainties'and which recommended 'more sophisticated models, such as the Band Model should be tested out'.

---

[19] Bevanger, K., Berntsen, F., Clausen, S., Dahl, E.L., Flagstad, Ø. Follestad, A., Halley, D., Hanssen, F., Johnsen, L., Kvaløy, P., Lund-Hoel, P., May, R., Nygård, T., Pedersen, H.C., Reitan, O., Røskaft, E., Steinheim, Y., Stokke, B. & Vang, R. 2010. Pre- and post-construction studies of conflicts between birds and wind turbines in coastal Norway (BirdWind). Report on findings 2007-2010. - NINA Report 620. 152 pp.
[20] May, R., Hoel, P.L., Langston, R., Dahl, E.L., Bevanger, K., Reitan, O., Nygård, T., Pedersen, H.C., Røskaft, E. & Stokke, B.G. (2010). Collision risk in white-tailed eagles. Modelling collision risk using vantage point observations in Smøla wind-power plant. – NINA Report 639. 25 pp.
[21] May, R., Nygård, T., Lie Dahl, E., Reitan, O. & Bevanger, K. (2011). Collision risk in white-tailed eagles. Modelling kernel-based collision risk using satellite telemetry data in Smøla wind-power plant. NINA report 692.

5.6.39 Given the spring bias of the 2010 analysis, which is likely to have resulted in an underestimation of the avoidance rates, and the added accuracy of the 2011 research using telemetry data, it is clear the most accurate avoidance rate figure attributable to this research is 98.0%.

5.6.40 Another site-specific factor is highlighted in **New AI Report Technical Appendix 8.6,** where at Smøla, the wind turbines were relatively smaller with faster rotating blades than those associated with current available turbine models, which may contribute to a higher recorded collision rate, and higher probability of collision should a bird pass through the rotor swept area. Previous analysis by Brightwind and BSG Ecology indicates that a 32% reduction in RPM on a given site can reduce predicted collision by 22%[22].

5.6.41 Based on the findings of **New AI Technical Appendix 8.5** and **New AI Technical Appendix 8.6,** and as stated in Band 2024, CRM outputs are presented at a range of avoidance rates (**Table 5.5** and replicated below) in line with the Band (2024) guidance. **New AI Technical Appendix 8.6** states that the collision estimate associated with a **98% avoidance** rate is recommended as the most appropriate value to be used in a white-tailed eagle assessment.

5.6.42 **Significance of Effect:** For the Revised Proposed Development alone, an annual collision rate of 0.118 to 0.296 (one collision every 3.4 years to 8.5 years) is considered to be **minor adverse** and therefore **not significant** in the context of the EIA Regulations.

5.6.43 The effect on the NHZ 14 and national white-tailed eagle population as a result of collisions is assessed in the **Cumulative Assessment** section (**5.7**) below.

Decommissioning Phase

5.6.44 Decommissioning effects remain unchanged from those set out in **EIA Report Chapter 8 'Ornithology'** and are scoped out of further assessment.

5.7 Cumulative Assessment

5.7.1 This section updates the Cumulative Assessment presented in **Section 8.10 of EIA Report Chapter 8 'Ornithology'**, relating to two IOFs considered in this AI chapter: golden eagle (within the GLAW/1 territory only) and white-tailed eagle (collision risk only). Potential impacts on red-throated diver are considered low (minor adverse) with no loss of any breeding pairs; therefore, no additional cumulative effects are predicted. The Cumulative Assessments for black grouse and hen harrier presented in the **EIA Report Chapter 8 'Ornithology'** remain valid.

Golden Eagle

5.7.2 The assessment of displacement impacts on G/LAW1 territorial golden eagles due to the Revised Proposed Development alone (**Section 5.6**) concluded that due to the relative low importance of the Wind Farm Area, as based on distributional data of the satellite tagged bird presented in **New AI Report Technical Appendix 8.5**, combined with baseline survey data, there would be no significant effects on the territory. Two other wind farms, the operational Beinn Ghlas (plus the consented Beinn Ghlas Repowering which occupies the same footprint) and the 'in planning' Cruach Clenamacrie wind farm are fully or partially within GLAW/1. The operational Carraig Gheal Wind Farm is not within the core of the G/LAW1 territory.

[22] Analysis conducted on a Galileo Empower project in Scotland in August 2024.

5.7.3 In terms of the roost assessment (**New AI Technical Appendix (Confidential) 8.8)** this concluded that even in an improbable, worst case, outcome where both roosts #62 and #69 are lost, there are many alternative roosts available in the range, even if Beinn Ghlas repowering and the Cruach Clemancrie wind farm developments are constructed.

5.7.4 It is therefore considered that the GLAW/1 territory is highly likely to remain viable, based on the conclusions of **New AI Technical Appendix (Redacted) 8.7** and **New AI Technical Appendix (Confidential) 8.8**.

5.7.5 This means that the Revised Proposed Development is unlikely to materially contribute to the cumulative impacts on golden eagle at the NHZ 14 level, and therefore no further cumulative assessment is required.

White-tailed Eagle

NHZ 14 Population

5.7.6 In terms of the potential additional collision mortality from wind farms within NHZ 14, taking into account information from NatureScot[23], the collision rates been updated with the updated collision rate of 0.296 (95% avoidance) and 0.118 (98%) for the Revised Proposed Development. In addition, the planning status of projects have been reviewed and updated, as in **Table 5.6**.

Table 5.6 NatureScot Consolidated White-tailed Eagle Collision Rate Outputs, NHZ 14 Active Projects[24]

Site	Planning Status	Collision Risk (95% avoidance rate)	Collision Risk (98% avoidance rate)
Beinn an Tuirc Phase 3	Operational	0.00	0.00
Carraig Gheal	Operational	0.00	0.00
Sub-total (Operational)		***0.00***	***0.00***
Beinn Ghlas repowering	Approved	0.246	0.098
Glasvaar	Approved	0.138	0.055
Blarghour S36c	Approved	0.103	0.041
Clachaig Glen 2	Approved	0.052	0.021
Ladyfield	Approved	0.017	0.007
High Constellation	Approved	0.013	0.005
Airigh	Approved	0	0
Sub-total (Approved)		***0.569***	***0.227***
An Carr Dubh	Application	1.228	0.491
Killean	Application	0.575	0.23
Corr Chnoc	**Application**	**0.296**	**0.118**
Cnoc Buidhe	Application	0.109	0.044
Eredine	Application	0.109	0.044
High Brenfield	Application	0.045	0.018
Allt Domhain	Application	0.037	0.015

[23] Extract from consolidated CR spreadsheet - Updated by AT 25 September 2025 - For release to Reporter in response to Ben Aketil WF questions - 5 March 2026
[24] Note that no estimate was provided by NatureScot for Cruach Clenamacrie Wind Farm application

Site	Planning Status	Collision Risk (95% avoidance rate)	Collision Risk (98% avoidance rate)
Breackerie	Application	0.031	0.012
Earraghail	Application	0	0
Sub-total (Application)		***2.43***	***0.972***
Total		**2.999**	**1.199**

5.7.7 When considering all active projects (operational, approved and application) the revised cumulative total for NHZ 14 is 2.999 (95% avoidance) or 1.199 (98% avoidance). In order to ascertain whether this range of additional mortality would result in a significant effect on the NHZ 14 population (presented for the range 25 to 45 pairs) and the national (Scottish) population (presented for 200 pairs), an updated population viability analysis (PVA) model has been prepared, which is presented in **New AI Technical Appendix 8.3**. Values for population size and productivity were derived from data provided by NatureScot and in the Scottish Raptor Monitoring scheme's annual reports[25], with adult and subadult survival rates taken from previous modelling of white-tailed eagle in Scotland carried out for NatureScot by RSPB (Sansom *et al*. 2016[18]).

5.7.8 The model was run for the baseline situation (i.e., without additional collision mortality associated with the Revised Proposed Development), and for a range of additional annual mortalities, which could be attributable to collisions. Comparison of the outputs from the baseline and impact runs allows calculation of the relative change in population growth rate (counterfactual of population growth, C-PGR) predicted over a 25-year timeframe when additional losses occur, for the regional (NHZ 14) population. For density independent PVA, as presented here for white-tailed eagle (and in Sansom *et al*. 2016[18]), the C-PGR is the reliable metric to use (see **New AI Technical Appendix 8.3** for details and justification).

5.7.9 Under the baseline situation, the model predicts an average annual growth rate of 1.055 (5.5%) for the NHZ 14 population and 1.090 (9.0%) for the national population. Sansom *et al*. (2016[18]) used a predicted national population annual growth rate of 8.6% for the 10-year period from 2014. An annual growth rate of 9.7% was predicted by Sansom *et al*. (2016) using the observed growth rate over the previous ten years up to 2014. The current lower growth rate may be reflective of the population starting to stabilise after the initial large growth rates following reintroductions.

5.7.10 A collision rate of three birds per annum (starting at the overly precautionary population of 25 pairs) would result in a reduction in annual growth rate in the NHZ population by 3.0% (C-PGR = 0.9694) compared with the unimpacted (baseline) population. Based on the more recent Argyll population information, a still precautionary scenario of a starting population of 35 pairs (144 birds) for NHZ 14 and collision rates of three birds per annum would reduce the annual growth rate by 2.2%. The population in 25 years would be over 60% larger than the starting population (c.240 birds). This would mean that favourable conservation status can be attained/maintained. Additionally, any concern that NHZ14 mortality would limit the ability of dispersing birds to re-populate former ranges cannot be justified on the basis of this analysis.

5.7.11 This has been confirmed by NatureScot. In a recent Freedom of Information Request Response[26], it is stated by NatureScot on page 23 of the Information document that "*any regional population modelling (NHZ level) … carried out for wind farm proposals using recent*

[25] https://raptormonitoring.org/annual-report
[26] Reference EIR2026 00063, dated 06 October 2026.

parameters will show the population is quite robust so at an individual level these proposals are not at National Interest objection level".

5.7.12 When considering the highly precautionary additional mortality of up to five birds per year due to collisions, population growth would remain on an upward trajectory. Although at five birds, the annual growth rate would reduce by up to 5.1%, the population in 25 years would be over 50% larger than the starting population (c.156 birds). Without additional mortality and without density dependence the population would be c.369 birds; however, this is not considered to be an ecologically realistic scenario.

5.7.13 When considering the predicted additional mortality specifically relating to the Revised Proposed Development of 0.118 birds per year due to collisions (98% avoidance), the annual growth rate would reduce by up to 0.2%, the NHZ 14 population in 25 years would be 350% larger than the starting population (c.357 birds). Without additional mortality and without density dependence the population would be c.369 birds. Even using the less appropriate 95% avoidance rate (0.296 birds per year), the NHZ 14 population would be over 200% larger in 25 years (c.343 birds).

5.7.14 Note that these predictions assume growth remains unlimited by resources which means that the difference between the impacted and unimpacted populations would continue to occur over the model's 25-year period, in contrast to a scenario where growth was constrained at some point (e.g. by food, nest sites, etc.). In the case of growth becoming constrained by competition for resources then the difference between the baseline and impacts projections would be evaluated in terms of how soon the population limit was attained.

5.7.15 With this level of impact, it is considered that favourable conservation status can still be attained/maintained over the operational period of the Proposed Development, and a **low magnitude** of impact on the NHZ 14 population is predicted. This finding is supported by Fielding and Geary (2026) (see **New AI Technical Appendix 8.5**) which examines the expansion of the species in mainland Argyll and finds '*there is no evidence that the increasing number of turbines is restricting the White-tailed Eagle's expansion'*.

5.7.16 **Significance of Effect:** the cumulative effect on the NHZ 14 white-tailed eagle population as a result of collisions is considered to be **minor adverse** and therefore **not significant** in the context of the EIA Regulations.

National (Scottish) Population

5.7.17 Population modelling was undertaken in relation to the potential effects of cumulative collision mortality on the national (Scottish) population (see **New AI Technical Appendix 8.3** for further details). The consolidated NatureScot collision spreadsheet for white-tailed eagle[23] advised that they consider the national cumulative collision risk of white-tailed eagles is currently approximately 20-21 birds per year (based on 95% avoidance) or 8-9 birds per year (based on 98% avoidance). Based on the analysis of **New AI Technical Appendix 8.5** even this level of cumulative national collision is likely to be an overestimate. To cover all scenarios, and including the Revised Proposed Development, a range of additional mortality of 1-45 birds per year was modelled.

5.7.18 The model predicted that an additional mortality of 20 birds would result in a reduction in growth rate in the Scottish population by 2.5% (CPGR = 0.9984992 to 0.9747043), compared with the unimpacted (baseline) population, although growth would remain positive at 1.048 to 1.058 (4.8% to 5.8%). The total population at year 25 would be around 2,500 to 3,900 individuals compared to c.4,200 under the baseline scenario (initial population was assumed to be 823 individuals).

5.7.19 Based on the assumed age structure (see **New AI Technical Appendix 8.3** for details), this would equate to 502 to 783 breeding pairs at year 25 (assuming 49% of the population are adults and 82% of the adult population are breeding). These values are therefore below the range of estimates of Scottish carrying capacity in Sansom *et al*. (2016[18]) who predicted a maximum number of 783 to 1,041 pairs.

5.7.20 However the NatureScot estimate of up to 20-21 collisions each year assumes all projects at application stage are consented and that all consented projects are constructed. It should be considered as a worst-case scenario. Additionally, there is now detailed evidence to suggest that NatureScot's predicted cumulative white-tailed eagle collision in Scotland is a significant overestimate. **New AI Technical Appendix 8.5** uses survey data collected between 2007 and 2014 to estimate the number of collisions predicted at Edinbane and Ben Aketil Wind Farms over this period, with the caveats that 1) these data were collected with the aim of understanding how birds behaved once the turbines were constructed; and 2) these wind farms were operational so some avoidance is expected. It must be assumed therefore that calculations using alternative data, obtained had the wind farms not been there, would have produced larger collision estimates. The collision estimates must, therefore, be treated as precautionary lower values compared with surveys had the turbines not been there. It should be noted that the original bird surveys took place between 2002 and 2005 when there was relatively little white-tailed eagle activity in this area.

5.7.21 The collision estimates for Edinbane Wind Farm for 2007 to 2014 using the standard Band model (at 95% avoidance rate) produced a range of annual estimates with the lowest rate during 2009 (0.05) (when the wind farm was under construction) to 2.07 in 2013. In reality, two white-tailed eagle collisions have been recorded over the whole operational lifetime of the wind farm, in 2016 and 2023.

5.7.22 The collision estimates for Ben Aketil Wind Farm over the same time period produced lower annual estimates ranging between 0 and 0.43. In reality, there have been no white-tailed eagle collisions at all at Ben Aketil Wind Farm.

5.7.23 **New AI Technical Appendix 8.5** concludes that **"***Given the amount of activity within the wind farms and NatureScot's advised 95% avoidance rate, it is surprising there have not been more collisions there [Ben Aketil and Edinbane]. After combining the CRA estimates from Ben Aketil and Edinbane, over the operational and surveyed period 2010 – 2014, the standard CRA approach suggests ~30 collisions should have occurred between 2014 and 2025 but only two collisions have been recorded. This is only 7% of predicted collision levels. Some collisions are likely to have gone undetected, or unreported, but a failure to report seems unlikely."* Other sections of **New AI Technical Appendix 8.5** demonstrate how this trend is replicated on a national level and illustrates that the 20-21 birds per annum figure quoted by NatureScot is significantly inflated and not reflective of real cumulative risk.

5.7.24 However, even ignoring the conclusions of **New AI Technical Appendix 8.5, New AI Technical Appendix 8.3** demonstrates that the Scottish population growth would remain robust even in the worst-case, unrealistic and unevidenced scenario where 20 collisions are modelled per annum. Even in this scenario it is considered that favourable conservation status would likely still be attained as the species would recover to its historic range. Overall, a permanent **low impact magnitude** on the national population is therefore predicted.

5.7.25 Based on the analysis in **AI Technical Appendix 8.5** and **AI Technical Appendix 8.6**, even an increase in avoidance rate to 97.5% or 98% would still be precautionary and likely overestimate the white-tailed eagle collision risk using the existing Band model. Nevertheless,

the findings summarised below do not rely on this observation which can be concluded on the existing 95% avoidance rate

5.7.26 **Significance of Effect:** overall, the effect on the Scottish white-tailed eagle population as a result of cumulative collision mortality is considered to be **minor adverse** and therefore **not significant** in the context of the EIA Regulations. This is unchanged from the conclusions reached in **EIA Report Chapter 8 'Ornithology'**.

5.8 Mitigation

5.8.1 The mitigation measures contained within the **EIA Report Chapter 8 'Ornithology'** remain unchanged and valid.

5.9 Summary of Impacts, Mitigation and Residual Effects

5.9.1 Residual effects remain unchanged from those presented in **Table 8.14** of **EIA Report Chapter 8 'Ornithology'**. These are:

- White-tailed eagle:
    - For the Revised Proposed Development, collision risk - minor adverse, not significant.
    - Cumulative, collision risk - minor adverse, not significant.
- Golden eagle:
    - For the Revised Proposed Development, displacement – negligible, not significant.
    - Cumulative, displacement – negligible, not significant.

6 Noise

List of Abbreviations

Abbreviation	Description
AGL	Above Ground Level
AM	Amplitude Modulation
ARTWN	Assessment and Rating of Wind Turbine Noise
BESS	Battery Energy Storage System
dB	Decibel
ABC	Argyll and Bute Council
EHO	Environmental Health Officer
GPG	The IOA 'Good Practice Guide'
IOA	Institute of Acoustics
LLV	Lower Limiting Value
NSR	Noise-Sensitive Receptor
PAN	Planning Advice Note
TNAC	Total Noise Assessment Criterion

6.1 Introduction

6.1.1 This chapter of the Additional Information (AI) Report evaluates the effects of noise from the Revised Proposed Development on nearby noise-sensitive receptors (NSRs) during construction, operation and decommissioning.

6.1.2 This chapter has been prepared primarily as a result of the removal of turbine T18 from the Proposed Development, which formed part of the scheme that was assessed in the 2024 Environmental Impact Assessment (EIA) Report. The following matters have also been clarified / addressed as an inherent part of this process:

- A discussion of the United Kingdom (UK) Government's updated wind farm noise assessment guidance *Assessment and Rating of Wind Turbine Noise*[1] ('ARWTN'); and
- Incorporation of the updated noise limits presented in the response to comments received from the Energy Consents Unit (ECU) regarding the 2024 EIA Report[2].

[1] UK Government, Department for Energy Security and Net Zero (2026). Assessment and Rating of Wind Turbine Noise.
[2] Metrica Environmental Consulting Limited (15th July 2025). Corr Chnoc Wind Farm - Noise Response.

6.2 Legislation, Policy and Guidance

6.2.1 All Legislation, Policy and Guidance remains the same as presented in the **EIA Report Chapter 14 'Noise'**, with the exception of the replacement of the former ETSU-R-97[3] with ARWTN.

6.2.2 A summary of ARWTN and the implications for the assessment of the Revised Proposed Development are set out below. It is important to note the fundamental assessment methodology of ARWTN is the same as the former ETSU-R-97, and this should be borne in mind throughout the remainder of this chapter.

Assessment and Rating of Wind Turbine Noise

6.2.3 ARWTN provides a framework for the assessment and rating of operational noise from wind turbine installations. It was published by the Department for Energy Security and Net Zero in June 2026, replacing ETSU-R-97 as the extant UK Government guidance for wind turbine noise assessment.

6.2.4 Both existing sound levels and noise from wind turbines typically vary with wind speed. As stated in ARWTN, wind turbine noise assessments should therefore consider the site-specific relationship between wind speed and background sound levels, along with the particular noise emission characteristics of the proposed wind turbines. Noise from existing wind turbines should not form part of the background sound level from which assessment criteria for new wind energy developments are derived.

6.2.5 ARWTN specifies the use of the $LA_{90,10min}$ descriptor for both background sound levels and wind turbine noise. Therefore, unless otherwise specified, all references to noise levels within this chapter relate to this descriptor. Similarly, all wind speeds referred to relate to a height of 10 metres (m) Above Ground Level (AGL) at the location of a given development, standardised to that height in accordance with current good practice guidance[4].

6.2.6 Noise assessment criteria in ARWTN take the form of a 5 decibel (dB) margin above the prevailing background sound level, except where background sound levels are lower than certain Lower Limiting Values (LLVs), in which case the LLVs apply. Separate criteria apply for daytime and night-time periods, as outlined below. The criteria apply to the cumulative effects of all wind turbines that affect a particular location, referred to as the Total Noise Assessment Criteria (TNAC).

6.2.7 During daytime, the guidance specifies criteria designed to protect the amenity of residents whilst within the external amenity areas of their properties. The criteria are based on the prevailing background sound level for 'quiet day' periods, defined as:

- 18:00 – 23:00 every day;
- 13:00 – 18:00 on Saturday; and
- 07:00 – 18:00 on Sundays.

[3] ETSU-R-97 (1996). The Assessment and Rating of Noise from Wind Farms.
[4] Institute of Acoustics (2013) A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind turbine Noise.

6.2.8 ARWTN recommends that the LLV for daytime should be set within the range 35 to 40 dB, $L_{A90,10min}$, with choice of value dependent on the following factors:

- The generating capacity of the wind farm and the likely consequence that the choice of LLV would have on the energy generation of the wind farm(s);
- The number of dwellings in the neighbourhood of the wind farm(s) and the magnitude of the levels to which these are exposed; and
- The duration and level of exposure to wind turbine noise of dwellings in the neighbourhood of the wind farm(s).

6.2.9 Different considerations apply at night, where potential sleep disturbance is the primary concern rather than the requirement to protect outdoor amenity. 'Night-time' is considered to be all periods between 23:00 and 07:00. Where prevailing night-time background sound levels are higher than the LLV, the criterion of 5 dB above the prevailing wind speed related background sound level applies.

6.2.10 Where the occupier of a property has a financial involvement in a wind energy development, ARWTN states that the LLV at that property can be increased to 45 dB(A) for both daytime and night-time period.

6.2.11 An alternative 'simplified assessment' approach is applicable in the absence of background sound level measurements. In such cases, the TNAC could be defined as 35 dB, $L_{A90,10min}$ at wind speeds of up to 10 metres per second (m/s).

6.2.12 ARWTN notes that assessments of infrasound, ground-borne vibration and low frequency sound are not required at the planning stage because… *"their effects on humans can be considered negligible or suitably controlled by the criteria set out in this guidance".*

Institute of Acoustics Statement on ARWTN

6.2.13 Following the publication of ARWTN, the UK Institute of Acoustics (IOA) released a statement[5] formally endorsing ARWTN, confirming that the principles and noise limits remain the same as ETSU-R-97 and providing clarification on the ongoing applicability of the GPG, stating:

"The Assessment and Rating of Wind Turbine Noise (ARWTN), endorses good practice guidance produced by the Institute of Acoustics. In this refreshed guidance, noise limits have not changed, and assessment principles are generally the same as before. The ARWTN does introduce new terminology and clarifications."

"For the assessment of wind turbine noise, the IOA have set out a statement advising on good practice, and practitioners should continue to use the IOA Good Practice Guide published in 2013, alongside the six 2014 Supplementary Guidance Notes."

[5] https://www.ioa.org.uk/news/wind-turbine-noise-assessment-guidance-arwtn-replaces-etsu97 [accessed 04/01/2026]

6.3 Assessment Methodology and Significance Criteria

Predicting Effects

6.3.1 The methodology for the prediction of effects, the derivation of noise limits and the determination of significance all remain the same as set out in **EIA Report Chapter 14 'Noise'.**

6.4 Consultation

6.4.1 Consultation was initially undertaken as summarised **EIA Report Chapter 14 Table 14.3**. Following submission of the EIA Report, additional consultation was undertaken in response to queries raised on behalf of Argyll and Bute Council (ABC). These queries were addressed through the submission to the ECU of a Clarification Report in August 2025. No further consultation has been undertaken in preparing this AI chapter.

Assumption and Limitations

6.4.2 All assumptions and limitations relevant to this assessment remain the same as those presented in **EIA Report Chapter 14, Paragraph 14.4.2**.

6.5 Baseline Conditions

Current Baseline

6.5.1 All baseline conditions remain the same as those presented in **EIA Report Chapter 14 Section 14.5.**

6.6 Assessment of Potential Effects

Construction Phase

6.6.1 The primary change to the Revised Proposed Development is the removal of turbine T18. This will also inherently result in a minor reduction in the amount of supporting infrastructure required and an associated reduction in construction traffic movements. Whilst this would be expected to reduce construction noise levels, the reduction is anticipated to be negligible in practice.

6.6.2 As shown in **EIA Report Chapter 14, Table 14.9**, the predicted levels of construction noise resulting for the Proposed Development were below the construction noise assessment criteria at NSRs. Given the above, the effects of noise due to the construction of the Revised Proposed Development would therefore be the same or marginally lower than that of the Proposed Development, and no further assessment is necessary.

Operational Phase

6.6.3 The only change to the Revised Proposed Development with the potential to affect noise during the operational phase is the removal of turbine T18.

Operational Noise Limits

6.6.4 As part of the consultation response described in **Section 6.4,** the cumulative noise assessment was updated to include Cruach Clenamacrie Wind Farm. As anticipated, the modelling results confirmed that the resulting cumulative noise levels were slightly higher than originally predicted in the EIA Report, therefore resulting in a slightly reduced 'noise budget' (i.e. the apportioned noise limits) applicable to the Proposed Development. Notwithstanding this, it was found that the Proposed Development remained in full compliance with the revised apportioned noise

limits by a minimum margin of approximately 6 dB, and there was no material change to the outcome of the noise assessment in **EIA Report Chapter 14**.

6.6.5 Worst case predicted operational noise levels for the Proposed Development are shown in **EIA Report Chapter 14, Table 14.10**. As the operation of Proposed Development was found to be compliant with the updated noise limits presented to the ECU in August 2025, it follows that the Revised Proposed Development would also be compliant with the same noise limits, given that the only change is the removal of one wind turbine (T18).

6.6.6 In the interest of completeness, the updated apportioned noise limits presented in the August 2025 response to the ECU have been reproduced in **Table 6.1**. These limits are appropriate for inclusion in the Revised Proposed Development's planning conditions, ensuring that the Revised Proposed Development operates in compliance with the requirements of ETSU-R-97 and / or ARWTN, both in isolation and cumulatively.

Table 6.1 Noise Limits Applicable to the Revised Proposed Development in Isolation

	Standardised 10 m Wind Speed, m/s									
	3	4	5	6	7	8	9	10	11	12
	Noise Limit, dB, $L_{A90,10min}$									
Daytime										
Akaroa	37.5	37.9	38.3	38.6	39.0	39.5	40.3	41.2	42.5	44.2
Clachadubh	35.8	36.8	37.9	39.0	40.6	42.4	44.2	46.2	48.4	50.6
Dorran Cottage	37.1	37.5	37.8	37.8	38.6	39.9	41.2	42.8	44.6	46.6
Kilbride Bungalow	37.5	37.5	37.9	38.7	39.9	41.4	43.2	45.1	47.2	49.5
Night-time										
Akaroa	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.7
Clachadubh	43.0	43.0	42.9	42.8	42.7	42.7	44.0	46.5	49.2	52.2
Dorran Cottage	43.0	42.9	42.8	42.5	42.4	42.4	42.4	43.3	45.6	48.2
Kilbride Bungalow	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.9	47.2	49.6

Cumulative Sites Update: Beinn Ghlas Repowering

6.6.7 Since the time of both the EIA Report for the Proposed Development, and the August 2025 Clarification Report discussed in **Section 6.4**, it is of note that Beinn Ghlas Wind Farm Repowering (ABC planning application number 25/01240/PP) has since been consented (15th September 2026).

6.6.8 As part of the EIA assessment process for Beinn Ghlas Repowering, the potential change in cumulative noise effects as a result of the decommissioning of the existing Beinn Ghlas Wind Farm and erection of the repowered scheme were considered; that assessment included the effects of the Proposed Development6, which had been submitted to planning prior to the Beinn Ghlas Repowering application.

6.6.9 It was found that the cumulative effects of Beinn Ghlas Repowering, Cruach Clenamacrie Wind Farm (see **Section 6.6.4)** and the Proposed Development remained in full compliance with ETSU-R-97 (and ARWTN) noise limits.

[6] Beinn Ghlas Wind Farm Repowering Appendix 11.1 Environmental Noise Assessment. Revision 5.

6.6.10 Given the above, and as the difference between the Proposed Development and the Revised Proposed Development is the removal of a wind turbine (T18), it follows that cumulative effects in combination with the Revised Proposed Development would also be acceptable, without the requirement for a further update to this assessment.

Other Noise-Emitting Elements

Both the Proposed Development and the Revised Proposed Development include a Battery Energy Storage System (BESS) and substation. The location of the BESS and substation for the Revised Proposed Development remains unchanged relative to the Proposed Development, and all noise effects associated with these elements remain not significant.

Decommissioning Phase

6.6.11 The assessment of noise during the decommissioning phase remains the same as that presented in **EIA Report Chapter 14, Paragraph 14.6.10.**

Cumulative Assessment

6.6.12 In accordance with ARWTN and the GPG, cumulative effects are an inherent part of the assessment of operational noise effects as set out above.

6.7 Mitigation

6.7.1 All mitigation for the construction, operation and decommissioning of the Revised Proposed Development remains the same as that presented in **EIA Report Chapter 14, Section 14.7**

6.8 Residual Effects

6.8.1 All residual effects of noise resulting from the construction, operation and decommissioning of the Revised Proposed Development are unchanged from those presented in **EIA Report Chapter 14, Section 14.9**, and therefore remain **not significant.**

6.9 Summary

6.9.1 The effects of noise resulting from the construction, operation and decommissioning of the Revised Proposed Development remain unchanged from those presented in **EIA Report Chapter 14, Section 14.9.**

6.9.2 The effect of noise due to the Revised Proposed Development remain **not significant**.

7 Climate Change Impact Assessment

List of Abbreviations

Abbreviation	Description
Ab	Absolute Emissions
AI	Additional Information
Be	Baseline Emissions
BESS	Battery Energy Storage System
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
DOC	Dissolved Organic Carbon
EIA	Environmental Impact Assessment
EIA Report	Environmental Impact Assessment Report
GB	Great Britain
GHG	Greenhouse Gas(es)
GWh	Gigawatt hour(s)
kWh	Kilowatt hour(s)
Mt	Megatonnes
MWh	Megawatt hour(s)
MW	Megawatt(s)
NTS	Non-Technical Summary
POC	Particulate Organic Carbon
Re	Relative Emissions
T18	Turbine 18

7.1 Introduction

7.1.1 This chapter of the Additional Information (AI) Report updates the Climate Change Impact Assessment as set out in **Environmental Impact Assessment Report (EIA Report) Chapter 18 'Climate Change Impact Assessment'** (November 2024) for the proposed Corr Chnoc Wind Farm (the Proposed Development) primarily to take into account the following developments in the interim period:-

- The deletion of turbine T18 and associated access track;
- Updates to the Scottish Windfarm Carbon Calculator compared to the version used in the November 2024 EIA Report.

7.1.2 With the exception of the deletion of turbine T18 and its associated access tracks, there are no other changes to the proposed Corr Chnoc Wind Farm compared to that assessed in **EIA Report Chapter 18 'Climate Change Impact Assessment'**. Throughout this chapter the revised Corr Chnoc Wind Farm including the removal of turbine T18 is referred to as 'the Revised Proposed Development'. The original proposal as submitted in November 2024 is referred to as 'the Proposed Development' for consistency with the November 2024 EIA Report and to distinguish it from the Revised Proposed Development.

7.1.3 The deletion of turbine T18 reduces the total length of new access tracks down from 15,540 metres (m) to 14,520 m.

7.1.4 The deletion of turbine T18 (and access tracks) requires the '*Part A - Assessment of Climate Change Impacts*' i.e. carbon balance assessment, within **EIA Report Chapter 18 'Climate Change Impact Assessment'** to be updated. *'Part B – Climate Resilience'* of that chapter is not considered to have materially changed and the previous assessment remains valid.

7.1.5 It is also the case that the Scottish Windfarm Carbon Calculator, which was previously available as an online service, is now only available offline in the form of a spreadsheet tool for calculating carbon emissions. Despite being offline, the tool has gone through a series of updates and improvements over the last couple of years, and some of the emissions factors that feed into the calculations have also been updated over the intervening period. The submission of the AI Report provides opportunity to update the assessment to use the latest version of the Carbon Calculator which is version 2.15.6.

7.2 Legislation, Policy and Guidance

7.2.1 Since the original Corr Chnoc Wind Farm EIA Report was submitted in 2024, key developments and changes in policy, legislation or guidance include:

- Climate Change (Emissions Reduction Targets) (Scotland) Act 2024 has been enacted;
- Scottish Carbon Budgets have been established;
- A Climate Change Committee Report to Parliament was published in 2025; and
- Scotland has a new Climate Change Plan (2026-2040).

Climate Change (Emissions Reduction Targets) (Scotland) Act 2024

7.2.2 At the time the original EIA Report was written, it referred to the Climate Change (Emissions Reduction Targets) (Scotland) Act 2024[1] as a Bill having been passed, and anticipated the introduction of a carbon-budget. This has now occurred. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2024 (the 2024 Act) received Royal Assent on 22 November 2024 and is in force. It formally replaces the previous annual and interim emissions target framework with five-year Scottish carbon budgets and requires the Scottish Ministers to set carbon budgets covering the period 2026 to 2045 (see below for details). It retained the statutory net zero by 2045 target but introduced a revised Climate Change Plan and reporting arrangements linked to carbon budgets.

Scottish Carbon Budgets

7.2.3 Following enactment of the 2024 Act, the Climate Change Committee provided its advice on Scottish carbon budgets in May 2025. The Scottish Government subsequently laid regulations[2] establishing carbon budgets covering 2026-2045. Parliament subsequently approved these regulations in October 2025. The carbon budgets are as listed below:

- 2026-2030 – 175 Mega tonnes (Mt) (57% lower than 1990 levels);
- 2031-2035 – 126 Mt (69% lower than 1990 levels);

[1] Scottish Government, '*Climate Change (Emissions Reduction Targets) (Scotland) Act 2024'*, received Royal Assent 22 November 2024, https://www.legislation.gov.uk/asp/2024/15/pdfs/asp_20240015_en.pdf
[2] Scottish Government, '*Climate Change (Scotland) Act 2009 (Scottish Carbon Budgets) Amendment Regulations 2025: statement*', 19 June 2025, www.gov.scot/publications/statement-accompany-climate-change-scotland-act-2009-scottish-carbon-budgets-amendment-regulations-2025/

- 2036-2040 – 81 Mt (80% lower than 1990 levels); and
- 2041-2045 – 24 Mt (94% lower than 1990 levels).

Climate Change Committee's 2025 Report to Parliament

7.2.4 The Climate Change Committee's latest (2025) Report to Parliament[3] was published in February 2026. Key conclusions in the report include:

- Scotland's emissions continue to fall and are now less than half the 1990 levels;
- The new carbon-budget framework provides a more credible route to net zero;
- There remains a need to produce an effective and credible final Climate Change Plan, particularly in relation to delivering increases in low-carbon heating;
- There is a need for a clear strategy to accelerate land use change to deliver a '*significant and sustained increase*' in new woodland planting and peatland restoration; and
- There is also a need for more government support to facilitate the rapid transition to electric transport.

Scotland's Climate Change Plan (2026-2040)

7.2.5 Scotland's Climate Change Plan 2026 to 2040[4] was published in March 2026 following a period of public consultation and engagement. The Plan sets out policies intended to deliver the early carbon budgets and net zero by 2045, including measures relating to the electrification of transport, the decarbonisation of heat in buildings; peatland restoration; woodland creation and improvements to land use and agriculture.

7.3 Assessment Methodology and Significance Criteria

7.3.1 The Assessment Methodology and Significance Criteria remains as reported in **EIA Report Chapter 18 'Climate Change Impact Assessment', Section 18.3** and is not repeated here.

7.4 Baseline Conditions

7.4.1 The following sections summarise the findings of the carbon balance calculations in terms of predicted electricity generation, carbon savings, carbon losses and gains associated with the Revised Proposed Development, and the predicted carbon payback time. Details of the carbon calculator input data, their sources, and results for the expected, maximum and minimum (best and worst-case) scenarios, can be viewed in **New Technical Appendix AI 18.2.**

Renewable Energy Generation

7.4.2 The anticipated installed capacity of the Revised Proposed Development is 79.2 Megawatts (MW) (reduced from 86.4MW for the Proposed Development due to the removal of turbine T18). The amount of renewable electricity produced by the Revised Proposed Development (based on the candidate turbine described in **EIA Report Chapter 4 'Description of Proposed Development**' and the Applicant's own modelling of the anticipated load factor) in the expected scenario has been estimated to be in the region of 243.5 Gigawatt hours (GWh) per year in the Carbon Calculator Tool (reduced from 266 GWh for the Proposed Development). This is

[3] Climate Change Committee, '*Progress in reducing emissions in Scotland - 2025 report to Parliament'*, February 2026, https://www.theccc.org.uk/wp-content/uploads/2026/02/Progress-reducing-emissions-in-Scotland-2025-report-to-Parliament-34378gfhdk928365sjfge.pdf
[4] Scottish Government, 'Scotland's Climate Change Plan: 2026–2040', 24 March 2026, https://www.gov.scot/publications/scotlands-climate-change-plan-2026-2040-annexes/documents/

estimated to be equivalent to the average annual electricity demand of approximately 70,313 typical households (with an average domestic consumption per GB household of 3,463.4 kilowatt hour (kWh), based on the latest available figures from 2024)[5]. These figures compare to 78,444 typical households for the Proposed Development assessment, and a slightly increased average electricity consumption compared to the 3,386.6 kWh figure set out in **EIA Report Chapter 18, paragraph 18.4.2**.

7.4.3 The 25MW BESS remains part of the Revised Proposed Development and will allow delayed export of some of this generation but will not alter the overall quantum of energy produced other than through a small adjustment for internal losses.

Reduction of Carbon Emissions

7.4.4 The electricity produced from the Revised Proposed Development is assumed to substitute energy production by entirely coal-fired generation, or a mix of fossil fuels, or the national grid mix of energy generation. The predicted emissions savings from the Revised Proposed Development are therefore equivalent to the emissions that would be expended in the Baseline scenario, where the generation was being provided from non-renewable sources.

7.4.5 A renewable energy development would have a maximum potential to save carbon emissions when substituting coal fired generation, but it is not possible to define the electricity source for which the Revised Proposed Development would substitute due to uncertainty in future grid mix and the potentially changing energy policy. For this reason, carbon emission savings are calculated for each fuel-mix. The potential annual carbon emission savings for the Revised Proposed Development are provided in **Table 7.1** below.

Table 7.1 Carbon savings for the Revised Proposed Development

Fuel Source	Expected GHG saving *(t CO_2e/yr)*	Minimum GHG saving *(t CO_2e/yr)*	Maximum GHG saving *(t CO_2e/yr)*
Coal-fired electricity generation	223,796	201,480	246,112
Grid-mix electricity generation	43,103	38,805	47,401
Fossil fuel-mix electricity generation	109,097	98,219	119,976

7.4.6 For ease of comparison, carbon savings as calculated in 2024 for the Proposed Development, with the additional turbine (T18) and previous emission factors, are presented below in **Table 7.2**.

Table 7.2 Carbon savings for the Proposed Development

Fuel Source	Expected GHG saving *(t CO_2e/yr)*	Minimum GHG saving *(t CO_2e/yr)*	Maximum GHG saving *(t CO_2e/yr)*
Coal-fired electricity generation	251,048	225,943	276,153
Grid-mix electricity generation	54,991	49,492	60,491

[5] Based on Sub-national electricity consumption statistics 2005 – 2024 (Department for Energy Security and Net Zero, published January 2013, updated December 2025). Available at: https://www.gov.uk/government/statistics/regional-and-local-authority-electricity-consumption-statistics

Fuel Source	Expected GHG saving (t CO_2e/yr)	Minimum GHG saving (t CO_2e/yr)	Maximum GHG saving (t CO_2e/yr)
Fossil fuel-mix electricity generation	112,640	101,376	123,903

7.4.7 For the purpose of the Assessment of Significance, the primary baseline scenario is assumed to be the Fossil Fuel Mix Scenario. This is because the Revised Proposed Development is expected to predominantly displace fossil fuel from the electricity grid rather than existing renewable generation. With existing coal-fired generation having already been removed from the UK grid mix, and the last coal-fired power station having closed in autumn 2024, the more typical Fossil Fuel Mix Scenario is considered to be the most representative counterfactual case to consider.

7.5 Assessment of Potential Effects

7.5.1 The text included in **Section 18.5 of EIA Report Chapter 18**, under headings for Embodied Emissions, Construction Emissions, Operational Emissions and Decommissioning Emissions, remains unchanged from the previous assessment and is not repeated here. Please refer to **Section 18.5** of **EIA Report Chapter 18** to review this commentary.

Total Emissions (Whole Life Carbon)

7.5.2 The Carbon Calculator produces estimates of the lifecycle emissions in its own format which does not directly separate out the emissions categories listed in paragraph 7.5.1 but rather combines manufacture, construction, and decommissioning emissions into a single grouping. Each of these categories will result in emissions and considered in isolation, some of these will be significant adverse effects, having a detrimental effect on climate change that is not consistent with the 1.5°C compliant trajectory. However, as is explored further in this chapter, it is not strictly legitimate to consider these emissions in isolation.

7.5.3 The Carbon Calculator determines the carbon emission savings, the carbon payback of wind farms, explores the potential implications under different scenarios of development, and provides assumptions about the site (i.e. expected, best-case and worse-case scenarios). It considers the following potential carbon savings and carbon costs associated with wind farms:

- GHG emission savings (when compared to emissions from different power sources);
- GHG emissions due to production, transportation, erection, operation, and decommissioning of the wind farm;
- GHG emissions from backup power generation;
- Foregone sink due to loss of carbon-fixing potential of the peatland as a result of disturbance and drainage;
- Loss and/or saving of carbon stored in peatland (by peat removal or changes in drainage);
- Carbon saving due to improvement of habitat;
- Loss and/or saving of carbon-fixing potential as a result of forestry clearance; and
- Carbon gains due to proposed habitat improvements such as bog restoration.

7.5.4 Carbon losses for the Revised Proposed Development in the expected scenario are summarised in **Table 7.3** below, which also includes the emissions calculated for the Proposed Development for comparison purposes.

7.5.5 The total losses predicted for the Revised Proposed Development are considerably less than was calculated for the Proposed Development. This is due to a combination of factors including the removal of one of the turbines and associated infrastructure, updates that have been made to the Carbon Calculator itself, changes in the grid emissions factors over the past couple of years reflecting ongoing decarbonisation, and more accurate estimates of the amount of concrete required on site. Collectively, these amount to an emission reduction of 117,772 tCO_2e over the lifecycle of the Revised Proposed Development compared to the Proposed Development.

Table 7.3 Carbon losses for the Revised Proposed Development (expected scenario)

Losses	Total Emissions for Proposed Development lifetime *(t CO_2e)*	Total Emissions for Revised Proposed Development lifetime *(t CO_2e)*
Losses due to turbine life (e.g. manufacture, construction, decommissioning)	215,398	75,462
Losses due to back-up	80,228	77,705
Losses due to reduced carbon fixing potential	4,317	6,454
Losses from soil organic matter	24,621	47,173
Losses due to DOC[6] and POC[7] leaching	75	73
Losses due to felling forestry	11,010	11,010
TOTAL LOSSES	335,648	217,876

7.5.6 Healthy peatlands act as important carbon stores and sinks, absorbing CO_2 from the atmosphere and depositing it as partially decomposed plant material (peat). However, when disturbed or drained, the peat becomes exposed to air and its decomposition accelerates above the rate at which new plant material is created and deposited, and the peatlands become carbon sources. Drainage and disturbance can also change the plant species composition of the vegetation and are associated with a reduction of the main peat-forming species, the Sphagnum mosses. Hence, large scale wind farm developments on peatlands have in some cases given rise to concerns over the potential release of GHGs from peatlands due to their potential to cause direct loss of peat, peat disturbance, and the introduction of drainage.

7.5.7 Conversely, improvements made to the peatland condition can have beneficial effects in terms of improving peat health and creating other opportunities for carbon reduction and sequestration.

[6] Dissolved organic carbon (organic substances from peat dissolved in water)
[7] Particulate organic carbon (organic substances from peat suspended in water as particles)

7.5.8 **Table 7.4** summarises the gains predicted for the Revised Proposed Development arising as a result of proposed peatland improvement works, see **Technical Appendix 9.6** and **Figure 9.11** of the **EIA Report for the Proposed Development**

7.5.9 The negative values in **Table 7.4** represent beneficial carbon savings rather than adverse carbon emissions.

7.5.10 The reduction in emission gains relate to minor changes in the way the carbon calculator works, the removal of the hardstanding and section of access track associated with turbine T18, and slight refinement of the materials estimate for the hardstandings to better reflect their proposed construction. Collectively, these amount to a reduction of 307 tCO_2e of carbon gains over the life of the Revised Proposed Development compared to the Proposed Development.

Table 7.4 CO_2 gains due to improvement of peatland in the Revised Proposed Development and Proposed Development (expected scenario)

Gains	Total Emissions over Proposed Development lifetime *(t CO_2e)*	Total Emissions over Revised Proposed Development lifetime *(t CO_2e)*
Change in emissions due to improvement of degraded bogs	-1,671	-1,677
Change in emissions due to improvement of felled forestry	-6,872	-6,896
Change in emissions due to restoration of peat from borrow pits	0	0
Change in emissions due to removal of drainage from foundation and hardstanding	-2,634	-2,297
TOTAL CHANGE IN EMISSIONS DUE TO IMPROVEMENTS	-11,177	-10,870

7.6 Assessment of Significance

Baseline Emissions

7.6.1 The baseline emissions (Be) are calculated with the assumption that the expected energy generation of the Revised Proposed Development is produced from alternative generation stock. In this case, a non-renewable generator is assumed to be the most likely to be displaced by the installation of the Revised Proposed Development and therefore the Fossil Fuel Mix scenario will be the most suitable baseline. Against this comparator, the emission savings from the operational phase of the Revised Proposed Development can be considered.

7.6.2 The annual energy generation of the Revised Proposed Development is predicted to be 243,521 MWh per year (i.e. 243.5 GWh per year) based on the expected 35.1% capacity factor. This capacity factor was based on the available wind resource data that had been acquired at the time of the assessment and aligns with the capacity factor used in **EIA Report Chapter 18** for direct comparison purposes. It is considered an accurate reflection of wind conditions on Site.

7.6.3 **Table 7.5** states the baseline emissions for the Revised Proposed Development based on the Fossil Fuel Mix Scenario taken from the Carbon Calculator. The calculator presents an annual emissions level for the fossil fuel generation, which has been extrapolated to cover the lifetime of the Revised Proposed Development. The equivalent figures for the Proposed Development are included for comparison. The reduction in annual and lifetime energy generation between

the Proposed Development and revised Proposed Development is due entirely to the removal of turbine T18.

Table 7.5 Baseline emissions associated with Fossil Fuel Mix Scenario for the Revised Proposed Development and Proposed Development

	Number of Years	Proposed Development		Revised Proposed Development	
		Energy Generation *(MWh)*	GHG Emissions *(t CO_2e)*	Energy Generation *(MWh)*	GHG Emissions *(t CO_2e)*
Annual	1	265,659	112,640	243,521	109,097
Lifetime	50	13,282,963	5,631,976	12,176,050	5,454,870

Absolute Emissions

7.6.4 As discussed in the preceding sections, the bulk of the absolute emissions (Ab) from the Revised Proposed Development occur during its initial manufacture, construction (including tree felling), and eventual decommissioning, as well as retaining backup generation for times when the wind generation is unable to supply power. During the operational phase, absolute emissions (Ab) will be very small, and primarily related to onsite maintenance activities.

7.6.5 The lifetime emissions figure is based upon the calculations provided in **New Technical Appendix AI 18.2** and includes embodied carbon and the release of sequestered carbon from peat disturbance. The annual emissions figure stated below assumes the net lifetime emissions (as calculated in the Carbon Calculator) are divided equally across each year of the operational phase.

7.6.6 **Table 7.6** shows the expected amount of GHG emissions that will be emitted by the Revised Proposed Development over its entire lifetime, and those same emissions averaged across its operational years. The equivalent figures for the Proposed Development are included for comparison. The 117,464 tCO_2e difference between the Proposed Development and Revised Proposed Development Lifetime figures is determined by the net change in losses and gains described in **Table 7.3** and **Table 7.4**, above.

Table 7.6 Absolute emissions associated with Fossil Fuel Mix Scenario for the Revised Proposed Development and Proposed Development

	Number of Years	Proposed Development		Revised Proposed Development	
		Energy Generation *(MWh)*	GHG Emissions *(t CO_2e)*	Energy Generation *(MWh)*	GHG Emissions *(t CO_2e)*
Annual	1	265,659	6,489	243,521	4,140
Lifetime	50	13,282,963	324,471	12,176,050	207,007

Relative Emissions

7.6.7 It is assumed that the renewable energy considered in the Absolute emissions scenario (Ab) will directly displace the fossil fuel generation in the Baseline emissions scenario (Be) and hence the associated emissions will be avoided for the lifetime of the Revised Proposed Development.

7.6.8 The Relative emissions (Re) have therefore been determined as having a beneficial (significant) impact on climate change. This is established in accordance with the significance criteria (see **Table 18.2** of **EIA Report Chapter 18 'Climate Change Impact Assessment'**), as demonstrated in **Table 7.7** below**.**

7.6.9 The renewable energy generated over the lifetime of the Revised Proposed Development corresponds to an overall emissions saving of approximately 5,247,863 tCO_2e when compared with a Fossil Fuel Mix Scenario alternative. This is shown in **Table 7.7** below, which also includes the figures from the Proposed Development for comparison. The reduction in the overall emissions saving for the Revised Proposed Development compared to the Proposed Development, totals 59,642 tCO_2e over the lifetime of the Wind Farm, driven primarily by the removal of turbine T18.

Table 7.7 Relative emissions associated with fossil fuel mix electricity alternatives for the Revised Proposed Development and Proposed Development

Scenario	Proposed Development Emissions *(t CO_2e)*	Revised Proposed Development Emissions *(t CO_2e)*
Baseline Emissions (Be)	5,631,976	5,454,870
Absolute Emissions (Ab)	324,471	207,007
Relative Emissions (Re)	5,307,505	5,247,863
Total Emission Savings	5,307,505	5,247,863

7.6.10 This positive impact deriving from the negative relative emissions (Re) demonstrates the emission savings associated with the energy generated from the Revised Proposed Development during the operational phase, compared with the equivalent amount of electricity generated by fossil fuels.

Payback Period

7.6.11 The carbon payback period is a simple measure to help assess the Revised Proposed Development and compare it against other schemes in a similar environment, while demonstrating the degree to which it will help contribute towards the Scottish Government's net zero target by 2045. The shorter the payback the greater benefit the Revised Proposed Development would have in displacing GHG emissions associated with electricity production, otherwise generated by burning fossil fuels and other energy sources (in the case of the Grid Mix Scenario counterfactual). The payback period is calculated taking the total carbon cost (carbon loses) associated with the Revised Proposed Development and dividing this by the annual carbon gains from displaced fossil fuel power generation emissions and any site improvements, such as bog restoration, where this is possible.

7.6.12 The expected payback period for the Revised Proposed Development against the Fossil Fuel Mix Scenario counterfactual is 1.9 years (see **Table 7.8**). This means that after the first 1.9 years all of the energy generation that is produced by the Revised Proposed Development is effectively entirely carbon free.

Table 7.8 Payback in years for the Revised Proposed Development for each scenario used in the Carbon Calculator

Compared to:	Expected Scenario *(yrs)*	Best case Scenario *(yrs)*	Worst case Scenario *(yrs)*
Coal-fired electricity generation	0.9	0.6	1.9
Grid-mix electricity generation	4.8	3.1	10.1
Fossil fuel-mix electricity generation	1.9	1.2	4.0

7.6.13 The above table illustrates that the Revised Proposed Development will pay back its carbon incredibly quickly, especially compared to other forms of fossil-fuelled generation which will always result in operational carbon emissions.

7.6.14 For comparison purposes, the equivalent table from **EIA Report Chapter 18**, is reproduced in **Table 7.9**, below. As can be seen, the carbon payback happens more rapidly for the Revised Proposed Development as a result of the various factors discussed in the preceding paragraphs. The Proposed Development's carbon payback for the Fossil Fuel Mix Scenario was longer at 2.9 years.

Table 7.9 Payback in years for the Proposed Development for each scenario used in the Carbon Calculator

Compared to:	Expected Scenario *(yrs)*	Best case Scenario *(yrs)*	Worst case Scenario *(yrs)*
Coal-fired electricity generation	1.3	1.0	1.8
Grid-mix electricity generation	5.9	4.4	8.3
Fossil fuel-mix electricity generation	2.9	2.1	4.0

7.7 Mitigation

7.7.1 Proposals relating to mitigation have not changed since the EIA Report was produced. These can be found in **Section 18.7 of EIA Report Chapter 18** and have not been reproduced here.

7.8 Residual Effects

7.8.1 The embodied carbon emissions associated with the manufacture of the wind turbines, the construction (including any tree felling and peat disturbance), and the eventual decommissioning of the Revised Proposed Development, as well as those emissions from retaining backup generation for times when the wind generation is unable to supply power, are residual effects of the Revised Proposed Development. In isolation, these indirect emissions are adverse and significant, however, they are emissions associated with essential enabling works and are unavoidable.

7.8.2 Carbon losses associated with the Revised Proposed Development are expected to be 217,876 tCO_2e, a reduction of 117,772 tCO_2e compared to the Proposed Development. This is due to a combination of factors including the removal of one of the turbines (T18) and associated infrastructure, updates that have been made to the Carbon Calculator itself, changes in the grid emissions factors over the past couple of years reflecting ongoing decarbonisation, and more accurate estimates of the amount of concrete required on site.

7.8.3 Carbon gains amount to 10,870 tCO^2e, a reduction of 307 tCO_2e over the life of the Revised Proposed Development compared to the Proposed Development. This is due to minor changes in the way the carbon calculator works, the removal of the hardstanding associated with turbine T18, and slight refinement of the materials estimate for the remaining hardstandings to better reflect their proposed construction.

7.8.4 Over the 50-year operational lifetime of the Revised Proposed Development, there is the potential to generate an estimated 12,176 GWh of renewable electricity, down from 13,283 GWh in the 12-turbine layout.

7.8.5 In the Baseline scenario, generating the equivalent amount of energy in a Fossil Fuels Mix scenario would expend 5,454,870 tCO_2e over the Revised Proposed Development lifetime (compared to 5,631,976 tCO_2e for the Proposed Development).

7.8.6 In the Absolute emissions scenario (Ab), emissions associated with the manufacture, construction, operation, and decommissioning of the Revised Proposed Development have been assessed to be 207,007 tCO_2e (compared to 324,471 tCO_2e for the Proposed Development).

7.8.7 The Relative emissions scenario (Re) indicates expected net savings. For the Revised Proposed Development this is 5,247,863 tCO_2e over the project lifetime, while for the Proposed Development the savings were calculated to be 5,307,505 tCO_2e. The significant beneficial effect of the Revised Proposed Development scenario, over the counterfactual Baseline scenario is clear, and carbon payback is expected to occur within about 1.9 years of commencing electricity generation.

7.8.8 Wind energy, through the production of low carbon electricity, reduces the exploitation of fossil fuel (coal and natural gas) by generating electricity from a renewable source. The Revised Proposed Development offsets the emissions associated with non-renewable methods of electricity generation, which has a significant positive effect. In this case, the offset emissions are much greater than the residual emissions, and therefore, the Revised Proposed Development mitigates the impact of climate change in the medium and long term.

7.8.9 When the Revised Proposed Development's overall relative emissions are considered as a whole, taking into account the beneficial offsetting of the fossil fuel generation during operation, the Revised Proposed Development results in major beneficial (**significant**) effects.

8 Summary of Significant Effects

8.1 Introduction

8.1.1 This chapter of the Additional Information (AI) Report provides a summary of the additional significant environmental effects associated with the Revised Proposed Development, taking account of the design changes (removal of turbine T18 and its associated access track, and other relevant factors such as taking account of changes to the cumulative baseline, changes in assessment methodologies, all as more fully explained in **AI Report Chapter 1 'Introduction and Purpose of the Additional Information'**.

8.1.2 As set out in **Table 2.1** of this AI Report, the technical and environmental topic areas that have been subject to further assessment in this AI Report are:-

- Landscape and Visual;
- Ornithology;
- Noise; and
- Climate Change Impact.

8.1.3 A brief summary of the findings of each AI Chapter, and the potential for significant environmental effects over and above those not already identified in the **2024 Environmental Impact Assessment (EIA) Report** or the **2025 AI Report** are set out in the following paragraphs.

8.2 Landscape and Visual

8.2.1 Following further assessment of the Revised Proposed Development taking account of design changes, changes to the cumulative baseline, changes to assessment methodologies and changes to the aviation lighting strategy, **AI Report Chapter 4 'Landscape and Visual'** concludes that the Revised Proposed Development will give rise to a significant environmental effect upon Landscape Character Type (LCT) 7 'Craggy Upland LCT/NW Loch Awe Unit', in the consented cumulative scenario.

8.2.2 The identification of this 'new' significant effect, not previously identified as part of the **2024 EIA Report** or **2025 AI Report**, is in relation to the consented cumulative scenario which would see effects levels increase relative to those reported in the **2024 EIA Report** due to the changed status of the Beinn Ghlas Repowering project, which was granted planning permission by Argyll and Bute Council in September 2026. As a consequence of the changed status of this project, the level of cumulative effects across some localised areas of the LCT would increase, and the level of effect would now be up to **major-moderate** and **significant.** Previously, the 2024 EIA Report concluded that the effects upon the LCT in the consented scenario would be not significant.

8.3 Ornithology

8.3.1 The updated ornithology assessment presented in **AI Report Chapter 5 'Ornithology'** considered the potential for significant environmental effects upon white-tailed eagle and golden eagle only, two species highlighted as of concern in consultation responses from

NatureScot. Based on supplementary baseline survey results and consultation with NatureScot, it was concluded that red-throated diver could be scoped out of further assessment in the AI Report.

8.3.2 Following further assessment of the Revised Proposed Development taking account of design changes, changes to the cumulative baseline and incorporating updating ornithology surveys undertaken between September 2025 – August 2026, **AI Report Chapter 5 'Ornithology'** concludes that the Revised Proposed Development would not give rise to any significant effects on white-tailed eagle or golden eagle, taking account of collision risk modelling and potential disturbance/displacement effects.

8.4 Noise

8.4.1 The updated noise assessment presented in **AI Report Chapter 6 'Noise'** considered the potential for significant environmental effects of the Revised Proposed Development taking account of design changes, changes to the cumulative baseline and the introduction of new operational wind turbine noise guidance in June 2026 by the UK Government '*Assessment and rating of noise from wind turbines: guidance'*.[1]

8.4.2 The effects of noise resulting from the construction, operation and decommissioning of the Revised Proposed Development remain unchanged from those presented in **EIA Report Chapter 14** 'Noise' and these effects remain not significant.

8.5 Climate Change Impact Assessment

8.5.1 The updated climate change impact assessment presented in **AI Report Chapter 7 'Climate Change Impact Assessment'** considered the potential for significant environmental effects of the Revised Proposed Development taking account of design changes as well as changes to the Scottish Government's carbon calculator introduced since submission of the **EIA Report** in 2024.

8.5.2 The Carbon Calculator demonstrates that the Revised Proposed Development will continue to save more carbon that is emitted in its manufacture, transportation and construction. The calculated carbon savings across the operational life of the Revised Proposed Development, are considered to be a major beneficial and significant benefit. The position remains unchanged from the findings **EIA Report Chapter 18** '**Climate Change Impact Assessment'** of the Proposed Development.

8.6 Summary

8.6.1 The only 'new' significant environmental effect associated with the Revised Proposed Development and not previously identified in the **2024 EIA Report** or the **2025 AI Report** relates to:-

- Effects upon LCT 7 Craggy Upland LCT / NW Loch Awe unit in the consented cumulative scenario, as a result of the now consented status of the Beinn Ghlas repowering project.

[1] https://www.gov.uk/government/publications/assessment-and-rating-of-noise-from-wind-turbines-guidance