

Margree Infrastructure Layout Amendments and Tip Height Extension

**Comparative Environmental Impact
Assessment Report
Volume I – Main Text**

May 2025

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1 INTRODUCTION

Background

- 1.1 Planning permission was granted for Margree Wind Farm at appeal on 21 March 2022 (references 20/2085/FUL and PPA-170-2153) for the erection, 35 year operation and subsequent decommissioning of a wind farm comprising of up to nine wind turbines and associated development. The original planning application was accompanied by an Environmental Impact Assessment Report dated November 2020 (herein after referred to as the “original EIAR”).
- 1.2 This Comparative Environmental Impact Assessment Report (Comparative EIAR) is submitted in support of an application made under Section 42 of the Town and Country Planning (Scotland) Act 1997 by Energiekontor UK Ltd (“the Applicant”) to vary condition 1 and 11 of planning permission 20/2085/FUL to allow a change to the infrastructure layout outwith the micrositing allowance and to allow a tip height extension (“the Proposed Development”).
- 1.3 This Comparative EIAR has been prepared by Energiekontor UK Ltd with specialist input where necessary and sets out the findings of a comparative Environmental Impact Assessment which has been undertaken to consider whether the Proposed Development would result in any additional significant environmental effects not identified in the original EIAR for Margree Wind Farm.

Site Location and Proposed Development

The Site and its Surroundings

- 1.4 The Site is located approximately 7km north east of St John's Town of Dalry and is set within three commercial forests: Knocksting, Margree and Holmhead, all planted between the 1970s and 1990s. The Site sits between the A702 and the site of the approved Glenshimmeroch Wind Farm. It occupies an upland plateau of rounded undulations and summits, contained by outlying rides and summits of Wether and Ewe Hills to the north east, Stroan Hill to the east, Knockman and Milnmark Hills to the south, and Hog, Kilnair and Glenshimmeroch Hills to the west.
- 1.5 As a result of the topography, views across the hills at high level are often extensive, whilst local views, often within steep sided valleys can be very contained, particularly where valleys are winding, narrow and forested, such as along the A702 between Moniaive and Dalry. The site is set back from the upper Glenkens valley and settled lowlands of the Drumlin Pastures to the south by intervening landform.
- 1.6 The surrounding area is very sparsely settled. There are no notable settlements within 5km of the Proposed Development. Instead, residential development within the locality of the Site is limited to a small number of scattered dwellings / farmsteads linked by minor roads extending across the open moorland.

- 1.7 There are a number of wind farms, either operational, approved or within the planning system, within the surrounding area. Most notably these include the operational Blackcraig Wind Farm (approximately 3km south east), the approved Glenshimmeroch Wind Farm (immediately adjacent to the west), the approved Divot Hill Wind Farm (immediately adjacent to the south) and the approved Troston Loch Wind Farm (immediately adjacent to the north west).

Description of Proposed Development

- 1.8 The key changes to Margree Wind Farm introduced by the Proposed Development are set out in Table 1.1 below.

Characteristic	2020 EIAR	Proposed Development
Number of turbines	9	9
Tip height	200m	220m
Micrositing	100m	100m
Blades	3	3
Turbine colour	Light grey	Light grey
Turbine foundations	Approximately 18m diameter on an hexagonal base	Approximately 18m diameter on an hexagonal base
Predicted Annual Energy Production	150 GWh	160 GWh
Aviation lighting required	Yes	Yes
Turbine Positions	As per Figure 3.1	New turbine positions all located within the consented 100m micrositing allowance shown on new Figure 1.2
Access Tracks	As per Figure 3.1	New access tracks to facilitate new turbine positions shown on new Figure 1.2
Crane pads	Approximately 55m x 25m rectangle with adjacent 43m x 12m blade lay down area	As per current manufacturer requirements (see new Figure 1.7)
Crane Pad Locations	As per Figure 3.1	Reorientation of crane pads to facilitate new turbine locations shown on new Figure 1.2
Substation Point of Connection (POC) Boxes	Not included within the application	POC boxes adjacent to the separately consented Margree 132kV Collector Substation as shown on Figure 1.2 and specification shown on Figure 1.13.

Welfare Unit	Not included within the application	Welfare Unit adjacent to the substation as shown on Figure 1.2
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Table 1.1: Summary of changes due to Proposed Development

1.9 The comparative turbine co-ordinates are presented in Table 1.2 below:

Turbine	Consented Turbine Co-ordinates		Proposed Turbine Co-ordinates	
	Easting	Northing	Easting	Northing
1	267755	587268	267834	587220
2	267755	587299	268241	587210
3	268643	587146	268653	587142
4	269174	587046	269205	586990
5	268168	587884	268168	587828
6	268832	587935	268877	587902
7	269345	587628	269415	587559
8	268795	588479	268832	588416
9	269447	588195	269541	588177

Table 1.2: Comparative Turbine Co-ordinates

Design Rationale

1.10 The Proposed Development consists of new turbine positions all located within their consented micro-siting allowance, the reorientation of crane pads to facilitate the new turbine positions, changes to the consented access tracks to facilitate the new turbine positions, and introduction of POC boxes adjacent to the substation. Some of the changes to the ancillary infrastructure to facilitate the development of the wind turbines are outwith the consented micro-siting allowance. This planning application therefore seeks the

approval of the new infrastructure layout as shown on Figure 1.2. The new layout has also been designed to consider the current forest felling plan and account for the extensive recent wind blow events.

- 1.11 In addition to the infrastructure layout changes outwith the micro-siting allowance, this application consists of an increased tip height for all nine turbines to 220m. This will allow for a greater choice of turbine models for the development.
- 1.12 All other elements of the existing planning permission for Margree Wind Farm would remain as previously approved.

Structure of Report

- 1.11 This Comparative EIAR has been prepared by Energiekontor UK Ltd and sets out the findings of a comparative Environmental Impact Assessment which has been undertaken to consider whether the Proposed Development would result in any additional significant environmental effects not identified in the original EIAR for the wind farm development.
- 1.12 Five areas with the potential for materially different effects from those reported in the original EIAR have been identified. These are in relation to cultural Heritage and archaeology, ecology, ornithology, hydrology, geology and hydrogeology, and forestry effects of the Proposed Development.
- 1.13 This Comparative EIAR is structured as follows:
 - Section 1 provides a background to the Proposed Development;
 - Section 2 presents a review of the key topics in the original EIAR and consented development and any specific items within these topics which have the potential for materially different environmental effects as a result of the Proposed Development;
 - Section 3 provides the most up to date planning policy context for the application;
 - Section 4 provides an assessment of the forestry effects arising from the Proposed Development;
 - Section 5 provides an assessment of the ecological effects arising from the Proposed Development;
 - Section 6 provides an assessment of the ornithological effects arising from the Proposed Development;
 - Section 7 provides an assessment of the Landscape and Visual effects arising from the Proposed Development; and
 - Section 8 provides a summary of the findings of the comparative environmental assessment.

The Applicant

- 1.14 Energiekontor UK Ltd is a renewable energy development company with offices in Glasgow, Leeds and Edinburgh. The company was formed in 1999 and develops onshore wind and solar farms throughout the United Kingdom. The company operates 10 existing wind farms in the UK. EK also has a number of other wind and solar projects at various stages of the development process throughout the UK.
- 1.15 Energiekontor UK Ltd is part of the Energiekontor Group. The parent company, Energiekontor AG, was established in 1990 in Bremerhaven in Northern Germany. It has since grown to become one of the leading wind energy companies in Europe and is active in Germany, France, The Netherlands, Portugal, the USA and the UK. The company has built more than 140 onshore wind farms in Europe.

Contact for Further Information and Commenting

- 1.16 A hard copy of this Comparative EIA will be available for viewing during normal office hours at Dumfries and Galloway Council's headquarters. The address is: Council Headquarters, 109-115 English Street, Dumfries, DG1 2DD.
- 1.17 For additional copies, a charge of £15 will be made for a full electronic copy of the Comparative EIA on CD. Costs for paper copies are as follows:
- Volume I – Written Text £50
 - Volume II – Figures £500
 - Volume III – Appendices £50
 - Volume IV – Non-Technical Summary free of charge
- 1.18 Requests for copies should be sent to: George.Oldroyd@energiekontor.com.

2 COMPARATIVE EIA SCREENING

Introduction

2.1 This Comparative EIAR has been prepared by Energiekontor UK Ltd and sets out the findings of a comparative Environmental Impact Assessment which has been undertaken to consider whether the Proposed Development would result in any additional significant environmental effects not identified in the 2020 EIAR for the wind farm. This section provides an appraisal of the potential for significant environmental effects to occur as a result of the Proposed Development.

Comparative EIA Screening

2.2 Table 2.1 below sets out the findings of the comparative EIA screening exercise.

Landscape and Visual Amenity	
Key findings from 2020 EIAR for the wind farm	In terms of effects on landscape features, it is considered that there would be no more than a minor adverse level effect on existing landscape features during construction, which would be not significant. In terms of effects on landscape character, the Site is located within the extensive 176: Foothills with Forest - Dumfries & Galloway LCT. Within 1km, the LCT is directly affected as a result of the turbines, however, as the turbines are surrounded by commercial plantation woodland, the effect of the turbines would be limited in some areas. The magnitude of change is assessed as high, resulting in a major level of effect upon the LCT, which is deemed to be significant. Within 3km, the effect upon the 176: Foothills with Forest - Dumfries & Galloway LCT, to the east and south-east would be limited by higher land adjacent to the Site. Indirect effects upon the remaining areas would be partly limited by extensive areas of commercial plantation woodlands, however, where areas of open moorlands are located, the influence of the Proposed Development would be greater. The magnitude is assessed as high to medium, resulting in a moderate to major effect upon the LCT, which is deemed to be significant. Beyond 3km, effects upon the LCT are precited to be not significant. Within 3km of the 175: Foothills - Dumfries & Galloway LCT, the local hills, namely Wether Hill and Ewe Hill limit the theoretical visibility within the LCT. Beyond 3km, to the north-east land rises up towards high peaks, as well as to the south-east where open moorland and local hills are located. Due to the elevated location in comparison to the Site, the magnitude of change is

	assessed at worst as medium to high, resulting in a moderate to major level of effect upon the LCT, which is deemed to be significant, limited to the highest peaks. Within 5km of the 178: Southern Uplands with Forest – Dumfries and Galloway LCT, the Proposed Development would influence only areas of higher ground. Other areas potentially influenced would be curtailed by woodland cover. The magnitude of change is assessed as no greater than medium to high, resulting in a moderate to major level of effect upon the LCT, which is deemed to be significant, limited to only the highest peaks closest to the Site. All other predicted effects upon LCTs within the study area, would be not significant. In terms of effects on visual amenity, there would be a significant visual effect experienced at three of the 15 representative viewpoints assessed, including two from minor roads in proximity to the Site and one from an elevated location on the Southern Upland Way close to the Site, plus at three out of the 15 properties within the vicinity of the site. For properties within 5km there would be significant visual effects upon select properties to the north and west of the Site, including Fingland, Auchenshinnoch and Lochinvar Lodge, due to the open nature and proximity to the Site. However, there would be no significant effects upon other properties or upon the surrounding settlements. There would be significant effects upon the two minor roads located close to the Site to the north and west. All other effects upon surrounding roads, including those accommodating tourist routes, are deemed to be not significant. A significant effect would occur along Core Path 217: Margree, as the path passes adjacent to the proposed turbines. In addition, significant effects would arise along short stretches along the National Byway and Southern Upland Way to the north-west of the Site where is proximity to the proposed turbines. All other recreational routes and Core Paths are deemed to be not significant. Significant effects were identified in relation to the aviation lighting upon the minor roads to the north and west of the Site, with all other surrounding settlements and roads deemed to have effects which were not significant. No potential for
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	significant effects was identified in relation to the Galloway Hills Dark Sky Park. In terms of effects on the Thornhill Uplands RSA and Galloway Hills RSA, there will be some adverse effects upon landscape character and visual amenity experienced from limited parts of the Thornhill Uplands RSA, particularly to the south-west, however, most of these would be not significant and they will not affect the ability to appreciate the underlying Thornhill Uplands landscape. The landscape as a whole would remain attractive and legible. Some adverse effects upon landscape character and visual amenity would be experienced from relatively small eastern parts of the Galloway Hills RSA; however, these would not be significant. In terms of cumulative effects, overall there would be minimal significant additional cumulative effects as a result of the introduction of the proposed development to a landscape that already features numerous commercial wind energy developments. In terms of the overall totality of effect, there would be a significant overall effect on the landscape character of the '176- Foothills with Forest' '18a – Stroan unit'. However, it should be noted that the Margree scheme would lie in close proximity to existing and consented schemes surrounding it and would not therefore introduce turbines to a part of the landscape character area which was not already influenced to some degree by wind energy development. In terms of cumulative effects upon views, there would be a slight additional impact upon views close to the Site and from the National Byway as a result of the addition of the Margree turbines to the consented baseline. However, it is not considered that these additional effects would result in significant effects, which have not already been reported in the main assessment. It is acknowledged that the overall totality of the effect on visual receptors would be greater and, in some cases, would be significant where the additional impact of Margree of itself was not when seen in context of consented and in planning schemes. This is the case from a number of elevated viewpoints, where the influence of wind farm schemes can be seen in numerous directions, albeit with Margree only representing a
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	limited proportion of the overall collective significant cumulative visual effect.
Potential for material change / significant effects as a result of the Proposed Development	There is potential for changes to the significance of landscape and visual effects associated with the wind farm as a result of the increased tip height and as a consequence of night time effects due to the introduction of lighting. There is not considered to be any changes to the assessed landscape and visual effects associated with the wind farm as a result of the increased micro-siting allowance.
Comment	Further assessment to determine the Landscape and Visual effects arising from the tip height extension is provided at Chapter 7 of this Comparative EIAR.
Ecology and Ornithology	
Key findings from 2020 EIAR for the wind farm	From the evidence collected the following were identified as ecological features that may be affected by the different stages of development: bats, otter, reptiles, red squirrel and butterflies. The potential impacts of the Proposed Development on each identified feature were evaluated and assessed in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) guidance. After taking into account embedded mitigation within the design of the Proposed Development and mitigation measures that should be in place during the construction, operation and decommissioning stages of the Proposed Development, effects on bats, otter, reptiles, red squirrel and butterflies were found to be minor or less and therefore not significant. Similarly in relation to ornithology, no significant effects are predicted in relation to any bird species, either from the wind farm alone or in combination with other schemes.
Potential for material change / significant effects as a result of the Proposed Development	There is not considered to be any potential for material change or any alteration of the assessment of significant effects. These effects remain unchanged with the changes to the infrastructure layout.
Comment	Despite the significance of effects remaining unchanged, a detailed assessment of the ecological and ornithological effects arising from the proposed infrastructure changes can be found at Chapters 5 and 6 respectively of this Comparative EIAR.
Cultural Heritage	

Key findings from 2020 EIA for the wind farm	Four potential direct impacts on heritage assets have been identified, arising from construction of the Proposed Development. In addition, four other heritage assets lie within the 100m micro-siting allowance and could be affected by any micro-siting of the proposed layout. In the absence of mitigation, two of these direct impacts are assessed as being potentially of moderate significance, three) are of moderate/minor significance, two are of minor/negligible significance, and one is of negligible significance. These impacts are all assessed as being not significant in EIA terms. Mitigation measures have been set out that would avoid or reduce the predicted effects and residual effects of no more than minor significance (not significant in EIA terms) have been identified. Nine Scheduled Monuments, three Category A Listed Building, 20 Category B Listed Buildings, and 19 non-designated HER sites of 'national significance' have been identified within the 10km Outer Study Area, from which there are predicted visibility of the Proposed Development. Seven Non-Inventory Designed Landscapes and 12 non-designated HER sites of 'regional significance' have been identified within 5km from which there is predicted visibility of the Proposed development. The assessment has identified no effects of above the level of moderate significance. In all cases, there would be no significant adverse effects on the settings of these assets resulting from the construction and operation of the Proposed Development. The potential effect of the Proposed Development, both individually and cumulatively, in combination with other wind farm developments in the locality has been considered. No significant residual cumulative effects on the setting of any heritage assets would arise.
Potential for material change / significant effects as a result of the Proposed Development	Remains of a wall surrounding Margree farmstead, of low sensitivity, would be crossed by a proposed new access track to turbine MT1. Only small sections of the wall would be affected by the construction of the track, resulting in a direct impact of slight magnitude and of minor/negligible significance (not significant in EIA terms) and would not require mitigation.

Comment	An update to Figure 7.1: Cultural Heritage – Inner Study Area is provided in support of this application. No change in the significance of effect is predicted.
Noise	
Key findings from 2020 EIAR for the wind farm	Noise associated with the construction of the Proposed Development is considered not significant as assessed against relevant planning guidance in this regard due to the distance from on-site construction activity to neighbouring dwellings and the temporary nature of the works. An assessment of the increase in noise levels associated with increased numbers of HGVs on public roads to access the Site indicates that there will be no significant noise effects from construction traffic. An assessment of the noise levels resulting from the operation of the Proposed Development has been undertaken in accordance with relevant planning policy and relevant guidance relating to the assessment of noise from wind farms. As required by the policy and guidance, limits on cumulative noise limits were derived by taking into account previous background noise measurements and planning conditions for neighbouring wind farms, and compared with predicted cumulative noise from the Proposed Development operating alongside other wind farms in the area. Noise from the Proposed Development acting alone was also compared with limits adjusted for noise from other wind farms. It was found that both sets of noise limits were predicted to be met.
Potential for material change / significant effects as a result of the Proposed Development	The Proposed Development would continue to operate in accordance with the noise limits that are set out in the planning permission.
Comment	No change is predicted.
Traffic and Transport	
Key findings from 2020 EIAR for the wind farm	The construction programme associated with the Proposed Development is anticipated to cover a 12 month period, during which 2,181 HGVs would access the Site equating to 31 daily two-way HGV trips during the busiest construction month (Month 6). The movement of abnormal loads is not anticipated to exceed 12 two-way trips per week over the course of four months (with no overlap during the busiest construction months).

	A robust assessment was undertaken based on a conservative approach for the two-way construction traffic movements and the worst-case scenario for each link by assuming 100% distribution of traffic along each road. The impact of construction traffic could increase traffic flows along the road links within the Study Area by the following: • 11% along the A702 (and B7075); and • 3% along the A713 (and A712). The percentage increase in HGVs associated with the worst-case month of the construction programme for the Proposed Development could increase HGV levels by the following: • 172% along the A702 (and B7075); and • 20% along the A713 (and A712). The impacts and effects of the Proposed Development represent a conservative approach assuming that 70% stone requirements are imported to the Site while it is anticipated that a much larger proportion of stone will be won from on-site borrow pits. Furthermore, these increased traffic levels are temporary in nature and are likely to be lower during the other 11 months of construction. The assessment concludes that effects of increased traffic as a result of the Proposed Development are deemed to be not Significant prior to any mitigation measures. The assessment concludes that the traffic levels anticipated during the busiest month of construction can be accommodated by the existing road network within the study area and further managed / minimised by the implementation of a Construction Traffic Management Plan.
Potential for material change / significant effects as a result of the Proposed Development	The Proposed changes to the infrastructure layout would not change the significance of effects associated with wind farm construction traffic.
Comment	No change is predicted.
Soil and Water	
Key findings from 2020 EIA for the wind farm	The potential effects on the hydrological, geological and hydrogeological environment have considered: • Pollution Incidents; • Erosion and sedimentation; • Changes to water resources i.e. private water supplies; • Modification of surface water and groundwater flows;

	• Modification of natural drainage patterns; • Impediments to flow and flood risk; • Peat instability; and • Compaction of soils. Following the identification and assessment of the key receptors, taking into account the potential effects listed above, a comprehensive suite of mitigation and good practice measures has been incorporated into the design, including extensive buffer areas. In addition a site specific CEMP as well as detailed design of infrastructure and associated mitigation will be implemented to protect the groundwater and surface water resources from pollution and minimise changes to the hydrological environment. The impact assessment has taken into account the hydrological regime, highlighting that the principal effects will occur during the construction. Assuming the successful design and implementation of mitigation measures the significance of construction effects on all identified receptors is considered to be of minor or no significance. The assessment of predicted ongoing and operational effects has also determined that the significance of effects on all receptors to be of minor/moderate minor or no significance. The assessment of predicted ongoing and operational effects has also determined that the significance of effects on all receptors to be of minor or no significance.
Potential for material change / significant effects as a result of the Proposed Development	There is very little peat extraction associated with the original layout (8,164 cubic metres). Therefore, peat impacts have been scoped out of the comparative EIA given the limited excavation required as a result of the changes to the infrastructure layout. The draft Peat Management Plan will be updated into a finalised version via a planning condition (condition 7 of the existing permission) prior to construction commencement.
Comment	No change is predicted.
Forestry	
Key findings from 2020 EIA for the wind farm	A total area of 16.05ha of trees would be removed due to the Proposed Development to accommodate infrastructure including roads and turbines. A total area of 34.24 ha of trees would be removed due to the Proposed Development to accommodate infrastructure including roads and turbines. An additional 51.88 ha would be removed from adjoining compartments to ensure the stability of surrounding crops and

	these areas would then be replanted in line with any agreed Long Term Forest Plans for the forests. Compensatory woodland planting extending to 37.66 ha would be created on a substitute planting site in order to comply with the requirements of the Scottish Government's Control of Woodland Removal Policy
Potential for material change / significant effects as a result of the Proposed Development	Felling would be advanced on 97.6 ha for construction of the Proposed Development. The species composition of the forest would change as a result of the Proposed Development forestry proposals. In particular, the area of Sitka spruce (whether pure or in a mix) would reduce by 31.7 ha. The area of unplanted ground would increase and, as a result, there would be a net loss of woodland area of 43.1 ha. In order to comply with the Scottish Government's Control of Woodland Removal Policy, compensation planting would be required to mitigate for the loss of woodland area. The Applicant is committed to providing appropriate compensatory planting. The extent, location and composition of such planting will be agreed with Scottish Forestry, taking into account any revision to the felling and restocking plans prior to the commencement of construction.
Comment	A detailed assessment of forestry effects can be found at Chapter 4 of this Comparative EIA.
Infrastructure and Shadow Flicker	
Key findings from 2020 EIA for the wind farm	An assessment has been carried out of the potential effects of the Proposed Development on the following interests: • Safety • Telecommunications • Aviation • Television reception • Buried and above ground infrastructure • Shadow flicker Potential Effects Following implementation of any necessary mitigation it is considered that there would be no potentially significant effects on infrastructure or safety arising as a result of the Proposed Development or in combination with any other existing, consented or proposed wind turbine developments in the local area.
Potential for material change / significant	There is not considered to be any potential for material change or any alteration of the assessment of significant

effects as a result of the Proposed Development	effects. These effects remain unchanged with the changes to the infrastructure layout.
Comment	No change is predicted.

Table 2.1: Comparative EIA Screening Summary

Summary

2.15 No topic areas have been identified as having the potential for materially different levels of effect when compared to the 2020 EIAR. However, in order to aid decision making further assessment has been undertaken in relation to forestry effects, ecological effects, ornithological effects, and landscape and visual effects. These topics are discussed further in sections 4, 5, 6 and 7 respectively.

3 RENEWABLE ENERGY AND PLANNING POLICY

Introduction

- 3.1 This chapter provides an outline of the national and local planning policies, guidance and other material considerations that are potentially relevant to the Proposed Development.
- 3.2 To maintain the impartiality of the Environmental Impact Assessment Report (EIA Report), this chapter does not assess whether the Proposed Development would comply with the identified policies.
- 3.3 The statutory instrument for the determination of planning applications in Scotland is the Town and Country Planning (Scotland) Act 1997 (as amended). Section 25 of this Act states:

'Where, in making any determination under the Planning Acts, regard is to be had to the development plan, the determination shall be made in accordance with the plan unless material considerations indicate otherwise'

- 3.4 While the development plan is the starting point for the decision-making process, it must be considered in the context of both the policy hierarchy (governed by Scottish Government policy) which in turn is informed by the wider suite of Scottish, UK and international policy and law relating to renewable energy development.

The Development Plan

- 3.5 The statutory Development Plan for the purposes of Section 25 of the Town and Country Planning (Scotland) Act 1997 consists of the following:
- The National Planning Framework 4; and
 - Dumfries and Galloway Council Local Development Plan
- 3.6 Relevant policies are set out below.

The National Planning Framework 4

- 3.7 NPF4 was published on 13 February 2023 and combines the spatial framework for Scotland with Scottish Planning Policy for the first time, forming part of the statutory Development Plan.
- 3.8 Annex A (page 94) of the document explains how NPF4 is to be used. It states:

"The purpose of planning is to manage the development and use of land in the long-term public interest...Scotland in 2045 will be different. We must embrace and deliver radical change so we can tackle and adapt to climate change, restore biodiversity loss, improve health and wellbeing, reduce inequalities, build a wellbeing economy and create great places."

3.9 NPF4 contains a spatial strategy, national level development management policies and identification of national developments which are aligned to the strategic themes of the Government's Infrastructure Investment Plan. NPF4 therefore introduces, for the first time, centralised development management policies which are to be applied across Scotland.

3.10 Part 1 of NPF4 sets out details of the National Spatial Strategy for Scotland. From the outset, it is clear that tackling climate change and achieving net zero emissions is at the forefront of the National Spatial Strategy:

"we have set a target of net zero emissions by 2045, and must make significant progress towards this by 2030. This will require new development and infrastructure across Scotland."

3.11 In relation to a key principle of achieving 'sustainable places' NPF4 states that:

"our future net zero, nature-positive places will be more resilient to the impacts of climate change and support the recovery and restoration of our natural environment. This will help Scotland's places to thrive within the planet's sustainable limits and will maximise the new economic and wellbeing opportunities from just transition to a net zero, nature-positive economy....Our strategy is to transform the way we use our land and buildings so that every decision we make contributes to making Scotland a more sustainable place. In particular, we want to encourage...diversity and expand renewable energy generation...."

3.12 NPF4 continues the planning policy approach of identifying 'national developments', which are defined as developments that strongly support the delivery of the spatial strategy, i.e. are 'needed'. Eighteen national developments are proposed in NPF4 to deliver the spatial strategy, each of which is accompanied by a statement of need and an assessment of lifecycle greenhouse gas emissions. The national development designation does not remove the need for consenting or associated impact assessment to be undertaken for individual projects, rather it means that the principle of the development does not need to be agreed in later consenting processes, providing more certainty for communities, business and investors.

3.13 Onshore wind farms exceeding 50 megawatts capacity are identified as national developments. NPF4 states:

"national development [Wind farms over 50MW capacity] supports renewable electricity generation, repowering, and expansion of the electricity grid."

A large increase in electricity generation from renewable sources will be essential for Scotland to meet its net zero emissions targets. Certain types of renewable electricity generation will also be required, alongside developments and increases in storage technology and capacity, to provide the vital services, including flexible response, that a zero-carbon network will require. Generation is for consumption domestically as well as for export to the UK and beyond, with new capacity helping to decarbonise heat, transport and industrial energy demand. This has the potential to support jobs and business investment, with wider economic benefits."

- 3.14 Even for wind farm developments that do not meet these national designation thresholds, the importance placed on rapid electricity generation indicates the government's keen stance on renewable energy infrastructure. This is further outlined by the statement of need and the fundamental part that renewable energy has in meeting net zero targets.
- 3.15 Part 2 of NPF4 introduces a number of national planning policies which apply to all development proposals in Scotland. It sets out that:
- "to achieve a net zero, nature positive Scotland, we must rebalance our planning systems so that climate change and nature recovery are the primary guiding principles for all our plans and all our decisions. That includes emissions reduction and the adaptations we need to make in order to be resilient to the risks created by a warmer climate."*
- 3.16 Policy 2 'Climate Emergency' states that "when considering all development proposals significant weight should be given to the global climate emergency".
- 3.17 Part C of the policy sets out that:
- "development proposals for national, major or EIA development should be accompanied by a whole life assessment of greenhouse gas emissions from the development. In decision making the scale of the contribution of development proposals to emissions in relation to emissions reduction targets should be taken into account."*
- 3.18 Policy 3 'Biodiversity' sets out the policies that seek to protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks.
- 3.19 Part A of the policy states that:
- "Development proposals will contribute to the enhancement of biodiversity, including where relevant, restoring degraded habitats and building and strengthening nature networks and the connections between them. Proposals should also integrate nature-based solutions, where possible."*
- 3.20 Policy 3(b) sets out that support for national or major development requiring an Environmental Impact Assessment will only be supported where the proposal will conserve, restore and enhance biodiversity. In order to achieve this, best practice measures should be used, and will be assessed against the following criteria:
- i. the proposal is based on an understanding of the existing characteristics of the site and its local, regional and national ecological context prior to development, including the presence of any irreplaceable habitats;*
 - ii. wherever feasible, nature-based solutions have been integrated and made best use of;*
 - iii. an assessment of potential negative effects which should be fully mitigated in line with the mitigation hierarchy prior to identifying enhancements;*

- iv. *significant biodiversity enhancements are provided, in addition to any proposed mitigation. This should include nature networks, linking to and strengthening habitat connectivity within and beyond the development, secured within a reasonable timescale and with reasonable certainty. Management arrangements for their long-term retention and monitoring should be included, wherever appropriate; and*
- v. *local community benefits of the biodiversity and/or nature networks have been considered.*
- 3.21 Part D of Policy 3 requires any adverse effects, including cumulative impacts, resulting from the Proposed Development on biodiversity, nature networks and natural environment to be mitigated and minimised through careful planning and design.
- 3.22 Policy 4 'Natural Places' seeks to protect, restore and enhance natural assets making best use of nature-based solutions.
- 3.23 Policy 4(a) considers development proposals that will have an unacceptable impact on the natural environment by virtue of type, location and scale, will not be supported.
- 3.24 Policy 4(d) considers the effects proposals will have on designated landscapes such as a local nature conservation site or landscape area in the LDP. The following considerations are made:
- i. *Development will not have significant adverse effects on the integrity of the area or the qualities for which it has been identified; or*
- ii. *Any significant adverse effects on the integrity of the area are clearly outweighed by social, environmental or economic benefits of at least local importance.*
- 3.25 Policy 4(f) allows for proposals to be supported if they meet the relevant statutory tests where it has been identified that there is likely to be an adverse effect on species protected by legislation. *"If there is reasonable evidence to suggest that a protected species is present on a site or may be affected by a proposed development, steps must be taken to establish its presence. The level of protection required by legislation must be factored into the planning and design of development, and potential impacts must be fully considered prior to the determination of any application."*
- 3.26 Policy 4(g) removes the need for consideration of effects of development on wild land if the development is meeting renewable energy targets and states buffer zones around wild land will not be applied in this case.
- 3.27 Policy 5(a) allows for proposals to be supported if they are designed and constructed according to the mitigation hierarchy by firstly avoiding and then minimising the amount of disturbance to soils on undeveloped land, and in a manner that protects soil from damage and minimises soil sealing.
- 3.28 Policy 5 (c) allows for the use of peatland, priority peatland and carbon rich soils for a limited number of uses, including renewable energy generation and states planning applications of this nature should be supported.

- 3.29 Policy 5(d) allows for development on peatland, carbon-rich soils and priority peatland habitat subject to a detailed assessment which identifies the baseline depth, habitat condition, quality and stability of carbon-rich soils, the likely effects of the development on peatland, and the likely effect of the development on climate emissions.
- 3.30 Policy 7 'Historic assets and places' seeks to protect and enhance historic environment assets and places.
- 3.31 Part A of Policy 7 sets out that development proposals with the potential to significantly impact historic assets and places must be accompanied by an assessment which is based on an understanding of the cultural significance of the historic asset and/or place. Assessments should identify likely physical or visual impacts of any proposals, including cumulative effects.
- 3.32 Policy 7(h) allows for development proposals that will affect scheduled monuments to be supported where direct impacts on scheduled monuments are avoided, significant adverse impacts on the integrity of the setting of the scheduled monument are avoided, and exceptional circumstances have been demonstrated to justify the impact on a scheduled monument and its setting and that any such impacts are minimised.
- 3.33 Policy 11 seeks to encourage, promote and facilitate all forms of renewable energy development onshore and offshore and states that *"LDPs should seek to realise their area's full potential for electricity and heat from renewable, low carbon and zero emission sources by identifying a range of opportunities for energy development"*. The policy outlines a number of considerations for renewable energy development:
- c) *Development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities.*
 - d) *Development proposals that impact on international or national designations will be assessed in relation to Policy 4.*
 - e) *In addition, project design and mitigation will demonstrate how the following impacts are addressed:*
 - i. *Impacts on communities and individual dwellings, including, residential amenity, visual impact, noise and shadow flicker;*
 - ii. *Significant landscape and visual impacts, recognising that such impacts are to be expected for some forms of renewable energy. Where impacts are localised and/or appropriate design mitigation has been applied, they will generally be considered to be acceptable;*
 - iii. *Public access, including impact on long distance walking and cycling routes and scenic routes;*
 - iv. *Impacts on aviation and defence interests including seismological recording;*
 - v. *Impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;*
 - vi. *Impacts on road traffic and on adjacent trunk roads, including during construction;*
 - vii. *Impacts on historic environment;*
 - viii. *Effects on hydrology, the water environment and flood risk;*
 - ix. *Biodiversity including impacts on birds;*

- x. Impacts on trees, woods and forests;
- xi. Proposals for the decommissioning of developments, including ancillary infrastructure, and site restoration;
- xii. The quality of site restoration plans including the measures in place to safeguard or guarantee availability of finances to effectively implement those plans; and
- xiii. cumulative impacts

- 3.34 Policy 22 'Flood risk and water management' seeks to strengthen the resilience to flood risk by promoting avoidance as the first principle and reducing the vulnerability of existing and future development to flooding.
- 3.35 Part C of Policy 22 requires development proposals to not be at risk of surface water flooding, increase the risk of surface water flooding to others, manage all rain and surface water through integrated Sustainable Urban Drainage Systems (SUDS), and seek to minimise the area of impermeable surface.
- 3.36 Policy 22(e) supports development proposals that implement measures to create, expand or enhance opportunities for natural flood risk management.
- 3.37 The accompanying Planning Statement assesses the Proposed Development against NPF4.

Dumfries and Galloway Council Local Development Plan

- 3.38 Dumfries & Galloway Council adopted its current Local Development Plan (LDP) in October 2019. It provides the planning framework for the Council area and will be kept under review and replaced at least every five years.
- 3.39 The LDP acknowledges at the outset that:
 - "1.9 The Scottish Government's overarching aim is to foster sustainable economic growth. The planning system has a key role to play in helping deliver this. Sustainable development is accepted as contributing to this. Developers are expected and encouraged to embrace sustainable development – and this LDP assumes that 'development' always means 'sustainable development'. Planning has an obligation to contribute towards sustainable development, sustainable economic growth, reducing the impact of climate change and creating high quality places.*
 - 1.11 The need to tackle climate change, and in particular reduce emissions of the greenhouse gases that contribute to it, is a principal challenge to sustainable economic growth...*
 - 1.12 Therefore, the **overarching principle** of this Plan is that all development proposals should support sustainable development, including the reduction of carbon and other greenhouse gas emissions."*
- 3.40 The LDP sets out a 'vision' of what Dumfries and Galloway will look like in 20 years' time. This includes the statement on page 11 that:

"There will also be...A viable rural economy and community characterised by [inter alia]...a range of renewable energy developments..."

3.41 Policy IN1 relates to renewable energy and Policy IN2 relates specifically to onshore wind development. These are the two most relevant policies for the Proposed Development.

3.42 Policy IN1 states:

"The Council will support development proposals for all renewable energy generation and/or storage which are located, sited and designed appropriately. The acceptability of any proposed development will be assessed against the following considerations:*

- *Landscape and visual impact;*
- *Cumulative impact;*
- *Impact on local communities and individual dwellings, including visual impact, residential amenity, noise and shadow flicker;*
- *The impact on natural and historic environment (including cultural heritage and biodiversity);*
- *The impact on forestry and woodlands; and*
- *The impact on tourism, recreational interests and public access.*

To enable this assessment sufficient detail should be submitted, to include the following as relevant to the scale and nature of the proposal:

- *Any associated infrastructure requirements including road and grid connections (where subject to planning consent);*
- *Environmental and other impacts associated with the construction and operational phases of the development including details of any visual impact, noise and odour issues;*
- *Relevant provisions for the restoration of the site;*
- *The scale of contribution to renewable energy generation targets;*
- *Effect on greenhouse gas emissions; and*
- *Net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities.*

** Acceptability will be determined through an assessment of the details of the proposal including its benefits and the extent to which its environmental and cumulative impacts can be satisfactorily addressed."*

3.43 Policy IN2 states:

"Assessment of all windfarm proposals:

The Council will support wind energy proposals that are located, sited and designed appropriately. The acceptability of any proposed wind energy development will be assessed against the following considerations:*

Renewable energy benefits:

The scale of contribution to renewable energy generation targets, effect on greenhouse gas emissions and opportunities for energy storage.

Socio-economic benefits:

Net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities.

Landscape and visual impacts:

- *The extent to which the landscape is capable of accommodating the development without significant detrimental landscape or visual impacts, including effects on wild land; and*
- *That the design and scale of the proposal is appropriate to the scale and character of its setting, respecting the main features of the site and the wider environment and that it addresses fully the potential for mitigation.*

Cumulative impact:

The extent of any cumulative detrimental landscape or visual impact or impacts on existing patterns of development from two or more wind energy developments and the potential for mitigation.

Impact on local communities and residential interests:

The extent of any detrimental impact on communities, individual dwellings, residents and local amenity, including assessment of the impacts of noise, shadow flicker, visual dominance and the potential for associated mitigation.

Impact on infrastructure:

The extent to which the proposal addresses any detrimental impact on road traffic, adjacent trunk roads and telecommunications, particularly ensuring transmission links are not compromised.

Impact on aviation and defence interests:

The extent to which the proposal addresses any impacts arising from location within an area subject to potential aviation and defence constraints, including the Eskdalemuir Safeguard Area.

Other impacts and considerations:

- a) *the extent to which the proposal avoids or adequately resolves any other significant adverse impact on the natural environment, including biodiversity, forests and woodland, carbon-rich soils, hydrology, the water environment and flood risk, the historic environment, cultural heritage, tourism and recreational interests and public access.*
- b) *the extent to which the proposal addresses any physical site constraints and appropriate provision for decommissioning and restoration.*

**Acceptability will be determined through an assessment of the details of the proposal including its benefits and the extent to which environmental and cumulative impacts can be addressed satisfactorily.*

- 3.44 The following policies of the LDP are also considered to be relevant to the Proposed Development:
- 3.45 Policy OP1 is an overarching policy that sets out general development considerations. It highlights that development will be assessed against various considerations depending on the scale, nature and location of the proposal including general amenity; historic landscape; landscape; biodiversity and geodiversity; transport and travel; sustainability; and the water environment.
- 3.46 Policy OP2 is an overarching policy that sets out general considerations in relation to design quality of new development. It highlights that development proposals should achieve high quality design in terms of their contribution to the existing built and natural environment, contributing positively to a sense of place and local distinctiveness.
- 3.47 Policy ED11 relates to the Council's support for the Galloway Forest Dark Sky Park. The Council will assess proposals for development on their merit where they do not adversely affect the objectives of the Dark Sky Park designation.
- 3.48 Policy HE1 relates to listed buildings. It sets out that certain considerations that apply to development proposals that impact on the character or appearance of a listed building or its setting.
- 3.49 Policy HE2 relates to Conservation Areas. It sets out that the Council will support development within or adjacent to a Conservation Area that preserves or enhances the character and appearance of the area.
- 3.50 Policy HE3 relates to archaeology. It sets out that the Council will support development and protects significant archaeological and historic assets, and protect the wider historic environment from adverse effects.
- 3.51 Policy HE4 relates to Archaeologically Sensitive Areas. It sets out that the Council will support development that safeguards the character, archaeological interest and setting of Archaeologically Sensitive Areas as designated by the Council.
- 3.52 Policy HE6 relates to gardens and designed landscapes. It sets out that the Council will support development that protects or enhances the significant elements, specific qualities, character, integrity and setting, including key views to and from, gardens and designed landscapes included in the Inventory of Gardens and Designed Landscapes or the Non-Inventory List. Proposals that would have a detrimental effect on the specific quality, character or integrity of a garden or designed landscape will not be approved unless it is demonstrated that the proposal has benefits of overriding public interest.
- 3.53 Policy NE2 relates to Regional Scenic Areas. It sets out that development within, or which affects Regional Scenic Areas, may be supported where the Council is satisfied that the landscape character and scenic interest for which the area has been designated would not be significantly adversely affected.
- 3.54 Policy NE4 relates to sites of international importance for biodiversity. It sets out that development proposals likely to have a significant effect on an existing or potential Special Protection Area, existing or candidate Special Area of Conservation or Ramsar site,

including developments outwith the site, will require an appropriate assessment and will only be permitted where inter alia the development does not adversely affect the integrity of the site.

- 3.55 Policy NE5 relates to species of international importance. It sets out that development proposals that would be likely to have an adverse effect on a European Protected Species will not be permitted unless it can be shown inter alia that the development would not be detrimental to the maintenance of the population of the species at a favourable conservation status in its natural range, and that there is no satisfactory alternative and the development is required for preserving public health or safety or for other areas of overriding public interest.
- 3.56 Policy NE6 relates to sites of national importance for biodiversity and geodiversity. It sets out that development affecting Sites of Special Scientific Interest and other national nature conservations will only be permitted where inter alia it will not adversely affect the integrity of the area or the qualities for which it has been designated or that any such adverse effects are clearly outweighed by social, environmental or economic benefits of national importance.
- 3.57 Policy NE7 relates to forestry and woodland. It sets out that proposals should seek to ensure that ancient and semi-natural woodlands and other woodlands with high nature conservation value are protected and enhanced.
- 3.58 Policy NE8 relates to trees and development. It sets out that where it is not possible to retain woodland then appropriate replacement planting will be required. Any such replacement planting scheme would be located where possible within the region and follow guidance contained within the Forestry and Woodland Strategy.
- 3.59 Policy NE11 relates to the water environment. It sets out that the Council will not permit development which would result in deterioration in the status of a waterbody or which would likely impede the improvements in waterbody status as set out in the Solway Tweed River Basin Management Plan, unless there are exceptional justifying circumstances. The policy further sets out that culverting of waterbodies should only be carried out where acceptable mitigation measures would be put in place to protect habitats, passage of fauna, and river form and flow.
- 3.60 Policy NE12 relates to protection of water margins. It sets out that where new development is proposed adjacent to or in the vicinity of waterbodies, the water margins will be protected unless there are compelling reasons to justify why this should not be done.
- 3.61 Policy NE15 relates to the protection and restoration of Peat Deposits as Carbon Sinks. It sets out that the Council will safeguard and protect peat deposits. Where renewable energy generating development is proposed the balance of advantage in terms of climate change mitigation must be with the proposed development.
- 3.62 Policy T1 relates to transport infrastructure. It sets out that development proposals will be appraised to determine their effects on the performance of the strategic and regional highway network.

Material Considerations

3.63 This section sets out relevant material considerations, namely:

- International Renewable Energy Policy Framework
- UK Carbon and Renewable Energy Policy
- Scottish Government Renewable Energy Policy Documents
- Scottish Government Web Based Renewable Guidance
- Local landscape capacity and wind farm sensitivity studies

3.64 These are considered in turn below.

International Renewable Energy Policy Framework

3.65 This section identifies the renewable energy policy framework at the international and national level that applies to renewable electricity generation and related climate change action.

3.66 The Planning Statement that accompanies this EIAR examines these policy documents in detail and sets out the hierarchy of EU, UK and Scottish Government renewable energy policy.

3.67 In terms of the relevant policy framework at the International and European level, the following key documents are of relevance:

- International Agreements and Obligations – The COP21 UN Paris Agreement and COP26 Paris Rulebook and Glasgow Climate Pact
- EU Renewable Energy progress Report – October 2020

UK Carbon and Renewable Energy Policy

3.68 In terms of UK carbon and renewable energy policy, the following documents are of relevance:

- UK Energy White Papers
- The UK's Sixth Carbon Budget (June 2021)
- Net Zero: Build Back Greener (2021)
- British Energy Security Strategy (2022)

Scottish Government Renewable Energy Policy Documents

3.69 The following Scottish government renewable energy policy documents are also of relevance:

- Scotland's Energy Strategy (2017);
- The Committee on Climate Change (CCC) advice to the Scottish Government on recovery from the Covid-19 crisis (May 2020);

- The recommendations from the Scottish Government's Advisory Group on Economic Recovery (June 2020);
- The Report from the Climate Emergency Response Group (CERG) 'Eight Policy Packages for Scotland's Green Recovery' (July 2020);
- The Update to the Climate Change Plan (December 2020);
- The Scottish Energy Strategy Position Statement (March 2021);
- Scottish Government's 'Bute House Agreement' (August 2021);
- Scottish Government Programme for Government 2021-2022;
- Onshore Wind Policy Statement (2022);
- Draft Energy Strategy and Just Transition Plan (2023); and
- Onshore Wind Sector Deal (2023).

Scotland's Energy Strategy

- 3.70 The Scottish Energy Strategy 2017 sets out the Scottish Government's overarching position on many forms of energy, including onshore wind. Specifically, it states that "*onshore wind must continue to play a vital role in Scotland's future*" ... "*which can be done in a way which is compatible with Scotland's magnificent landscapes.*" The Energy Strategy is currently being updated, with a draft Energy Strategy accompanying the Just Transition Plan in early 2023. These reiterate the findings of the Onshore Wind Policy Statement and aim to drive Scotland towards Net Zero by 2045, with a clear focus on the delivery of 12GW of new installed capacity by 2030.

The Committee on Climate Change (CCC) advice to the Scottish Government on recovery from the Covid-19 crisis

- 3.71 The CCC advice to the Scottish Government in May 2020 came after the Scottish Government approached the CCC requesting advice on a green recovery for Scotland in light of the Covid 19 pandemic. Within its response, the CCC sets out that "reducing greenhouse gas emissions and adapting to climate change should be integral to any recovery package." The CCC also note that many of the large infrastructure programmes are "*critical to preparing for climate change and achieving net zero emissions.*" Reference is specifically made to onshore wind as part of the large infrastructure required, and the CCC add that "*acceleration of these projects should take priority.*"

The recommendations from the Scottish Government's Advisory Group on Economic Recovery

- 3.72 The Scottish Government's Advisory Group on Economic Recovery was formed to provide input to Government on Scotland's economic recovery post-Covid 19. The report provided to the Government in June 2020 recognises that there is a need to "*grasp the tremendous opportunities for a green recovery which such a transition offers*", and that the net zero imperative presents "*an increased and urgent challenge for existing policy, planning and licencing frameworks to identify and consent suitable projects with a sufficient level of impact in the light of the climate emergency*".

The Report from the Climate Emergency Response Group (CERG) 'Eight Policy Packages for Scotland's Green Recovery'

- 3.73 Shortly following the Economic Advisory Group's Report, the Report of the Climate Emergency Response Group (CERG) to the Scottish Government was published in July 2020, titled 'Eight Packages for Scotland's Green Recovery'. The CERG Report states that it "encourages the Scottish Government to embrace these policy packages as key components of its economic recovery plan for a fairer and greener Scotland," and that these should be reflected in key policy milestones. It states that green recovery must be investment led, and the Scottish Government must create "an attractive policy environment for investors, resulting in a stronger business case for a climate neutral economy." The Report concludes with the view that "Scotland's response to Covid-19 is a massive opportunity to catapult and prioritise a just transition to a net zero carbon economy".

The Update to the Climate Change Plan

- 3.74 In December 2020, the Scottish Government published an update to the Climate Change Plan, covering the period 2018 to 2032, and responding to the new requirement in Scotland to meet net zero by 2045. Page 9 in particular sets out the strategic goal of achieving "decarbonisation across the whole energy system, including electricity, transport, industry and buildings" and "integrating climate change action into all of the decisions we make across Government".
- 3.75 The Update sets out the intention to prepare an Energy Strategy in 2021 and an updated Electricity Generation Policy Statement by 2022. Page 19 refers to a 2032 'pathway' whereby decisions take account of benefits across all energy sectors as well as economic and social benefits they create across Scotland. By 2032 it is intended that we will generate at least the equivalent of 50% of our energy from renewable sources. It is stated on page 18, importantly, that "there will be a substantial increase in renewable generation, particularly through new offshore and onshore wind capacity".
- 3.76 The planning and consenting systems are recognised (p78) as remaining a "critical enabler of rapid renewables deployment in Scotland". The Climate Change Plan Update expects that renewable energy generation is expected to increase substantially between now and 2032 with an expectation of the development of between 11 and 16GW of new capacity to meet a rapidly increasing electricity demand.

The Scottish Energy Strategy Position Statement

- 3.77 The Scottish Energy Strategy Position Statement (March 2021) reinforces the consistent theme of the Scottish Government's support for a green, fair, and resilient economy. Onshore renewables are addressed within section 8 of the Statement where it is reported that "the continued growth of Scotland's renewable energy industry is fundamental to enable us to achieve our ambition of creating sustainable jobs as we transition to net zero". It adds that the Scottish Government "is committed to supporting the increase of onshore wind in the right places to help meet the target of net zero."

Scottish Government's 'Bute House Agreement'

- 3.78 On 20th August 2021, the SNP-led Scottish Government and the Scottish Green Party signed the Bute House Agreement which represents a formal co-operation agreement for the next five years of Government. Page 12 of this agreement sets out that *"the climate emergency means we need to use the limited powers we have to accelerate the decarbonisation of our energy system...our plans will see a significant increase in electricity demand for heating and transport. To accommodate this, we will support the continued and accelerated deployment of renewable energy."*
- 3.79 In order to achieve this, subject to consultation the Government and Green Party state they aim to deliver "an additional 8 to 12 GW of installed onshore wind by 2030, supported by changes to the planning system needed to permit the growth of this essential zero carbon sector".

The Scottish Government's Programme for Government 2021-2022

- 3.80 The Scottish Government's Programme for Government 2021-2022 followed the Bute House Agreement and is titled "A Fairer, Greener Scotland". It is the intention of the Government that all applications over 50MW have 'National Development' status which if adopted would give further importance and status to Section 36 applications. The Programme again re-iterates the importance of securing a further 8 to 12 GW of onshore wind capacity by 2030.

Onshore Wind Policy Statement

- 3.81 The Scottish Government published an updated Onshore Wind Policy Statement (OWPS) on 21 December 2022 which replaces the earlier version published in November 2017. The Ministerial Foreword makes it clear that seeking greater security of supply and lower cost of electricity generation are now key drivers alongside the need to deal with the climate emergency. It is stated:

"that is why we must accelerate our transition towards a net zero society. Scotland already has some of the most ambitious targets in the world to meet net zero but we must go further and faster to protect future generations from the spectre of irreversible climate damage".

"Scotland has been a frontrunner in onshore wind and, while other renewable technologies are starting to reach commercial maturity, continued deployment of onshore wind will be key to ensuring our 2030 targets are met".

- 3.82 The Foreword highlights that onshore wind has the ability to be deployed quickly, is good value for consumers and is also widely supported by the public and that:

"This Statement, which is the culmination of an extensive consultative process with industry, our statutory consultees and the public, sets an overall ambition of 20 GW of installed onshore wind capacity in Scotland by 2030".

- 3.83 The OWPS is structured on the basis of eight chapters which contain a mix of broad policy guidance and technical information. The points of most relevance to the Proposed Development are set out below.

- 3.84 The OWPS makes the following statement on page 5 in relation to the current deployment of onshore wind in Scotland:

"We must now go further and faster than before. We expect the next decade to see a substantial increase in demand for electricity to support net zero delivery across all sectors, including heat, transport and industrial processes".

- 3.85 Section 1.3 refers to the new 20 GW ambition and states:

"It is vital to send a strong signal and set a clear expectation on what we believe onshore wind capacity will contribute in the coming years.

In line with this commitment, and reflecting the natural life cycles of existing wind farms, this statement sets out a new ambition for the deployment of onshore wind in Scotland:

A minimum installed capacity of 20 GW of onshore wind in Scotland by 2030.

This ambition will help support the rapid decarbonisation of our energy system, and the sectors which depend upon it, as well as aligning with a just transition to net zero whilst other technologies reach maturity".

- 3.86 This statement is followed by reference to the 'Legislative Context', in particular the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 and the related Net Zero greenhouse gas emissions targets. The OWPS states that "meeting these targets will require decisive and meaningful action across all sectors" and that "onshore wind will play a crucial role in delivering our legally binding climate change targets".

- 3.87 Section 2.3 refers to a 'Vision for Onshore Wind in Scotland' and states that Scottish Renewables, on behalf of the sector in Scotland, has produced a 'Vision Statement' which the Government considers to "lay the basis of a more detailed sector deal" that will be developed by a newly formed Onshore Wind Strategic Leadership Group (SLG).

- 3.88 The Vision Statement includes the following statement:

"Onshore wind remains vital to meeting this increasing demand, providing fast deployment whilst minimising cost to the consumer. This will be achieved by deploying the most productive modern turbines that are taller than older models, by re-powering existing sites where possible and by maximising the use of our exceptional natural wind resources where environmental effects are acceptable".

- 3.89 Chapter 3 of the OWPS refers to matters relating to the following environmental topics:

- Shared land use;
- Peat and carbon-rich soils;
- Forestry;
- Biodiversity;
- Landscape and visual amenity; and
- Noise

3.90 With regard to landscape and visual amenity, the OWPS states at paragraph 3.6.1:

“Meeting our climate targets will require a rapid transformation across all sectors of our economy and society. This means ensuring the right development happens in the right place. Meeting the ambition of a minimum installed capacity of 20 GW of onshore wind in Scotland by 2030 will require taller and more efficient turbines. This will change the landscape”.

3.91 In addition, paragraph 3.6.2 of the OWPS cross refers to NPF4 and provides that outside of National Parks and National Scenic Areas:

“the criteria for assessing proposals have been updated, including stronger weight being afforded to the contribution of the development to the climate emergency, as well as community benefits”.

3.92 It is clear then that NPF4 and the OWPS represent a recalibration of how the planning balance should operate when making decisions on wind farm applications.

Draft Energy and Just Transition Plan

3.93 The Draft Energy Strategy and Just Transition Plan (2023) states that we need to transform the way Scotland generates, transports, and uses energy, in order to realise climate change ambitions. The requirement for an additional 12GW of onshore wind is a key policy facet of this document.

Onshore Wind Sector Deal

3.94 The Onshore Wind Sector Deal, published in September 2023, provides a framework of commitments between Scottish Government and the onshore wind sector in order to support the rapid development and deployment of onshore wind, including the identification of barriers and potential solutions and actions to, for example, decrease consenting times. It is very clear that the Scottish Government wishes to see quicker deployment of onshore wind and is actively supporting the sector to do so.

Scottish Government Web Based Renewables Guidance

3.95 The Scottish Government has produced web-based renewables guidance. The planning advice comprises a number of individual guidance notes including ‘Onshore Wind Turbines’. The Scottish Government published the most recent update of this on 28 May 2014.

3.96 The relevant aspects of the guidance are provided under the following headings and have been taken into account during design development.

- Landscape impact
- Impacts on wildlife and habitat, ecosystems and biodiversity
- Assessing impact on wildlife and habitats
- Buffer zones
- Impact on communities
- Separation distances

- Aviation matters
- Road traffic impacts
- Cumulative impacts; and
- Decommissioning.

3.97 The guidance advises that planning authorities should ensure, either via conditions or legal agreements, that site restoration takes place on expiry of the consent or the expiry of the specified period.

Local landscape capacity and wind farm sensitivity studies

Supplementary Guidance, Part 1 Wind Energy Development

- 3.98 In February 2020 the Council updated its *Supplementary Guidance, Part 1 Wind Energy Development: Development Management Considerations* document. It provides additional guidance in support of Part 1 of LDP Policy IN2. It sets out a range of development management considerations which should be taken into account when determining proposals for wind energy development, rather than providing specific additional development management considerations beyond what is already contained within the relevant policies of the LDP.
- 3.99 An updated Wind Farm Landscape Capacity Study was adopted in February 2025, superseding the previous version from 2020. This study was prepared by Carol Anderson Landscape Associates as an appendix ("the 2025 DGWLCS").
- 3.100 The 2025 DGWLCS finds that there is only scope for additional very large turbine development (>150m) in the following landscapes:
- Foothills with Forest – Eskdale/Castle, Oer/Tinnisburn and Stroan Landscape Areas (20)
 - Southern Uplands with Forest – Eskdale Muir Landscape Area (22).
- 3.101 The Site is located within the 20 Foothills with Forest Stroan unit. It is therefore one of only two areas within Dumfries and Galloway that has been identified as having scope for additional very large turbine development.
- 3.102 In relation to the Stroan unit the 2025 DGWLCS makes the following comments:
- Operational and consented wind farm development is/will be a key characteristic of this landscape.
 - The operational Blackcraig wind farm is located in this landscape area as are the consented Fell, Magree, Trostan Loch and Glenshimmeroch windfarms. The operational Wether Hill wind farm is located approximately 4km to the north-east of this landscape area within the adjacent Ken area of the Southern Uplands with Forest (22). Operational and consented wind farms within the Nithsdale, Ken and Carsphairn areas of the Southern Uplands (21) and Southern Uplands with Forest (22) Assessment Units lying to the north of this area are theoretically visible although landform and extensive forestry, together with the sparsely settled nature of these foothills, limits/will limit intrusion.

- Opportunities for development include, the medium to large scale of this landscape and the limited diversity of productive coniferous forest cover which covers much of this area; and the relatively sparse population and absence of well-used recreational routes which reduces susceptibility in relation to views and effects on visual amenity.
- Wind turbines should be sited on broader less prominent hills and ridges and within interior basins set well back from the edge of more settled landscapes including the Drumlin Pastures (13), Flooded Valley (8), Upper Dale (Glenkens) (9) and Upland Glens (10) Assessment Units. The less susceptible densely forested interior in the northern part of these foothills is/will be already occupied by operational and consented wind farms and this limits scope for additional development. Wind turbines should also avoid areas of more complex smaller scale landform commonly found at the transition with the Drumlin Pastures (13) and the Narrow Valley (4) of the Urr Water and more sensitive mosses and remnant broadleaved woodlands and other planted features. Construction access should utilise existing forestry tracks and avoid modification of the highly sensitive network of narrow minor roads within the adjacent Drumlin Pastures (13).
- Very tall turbines closer to 200m tall and over would dominate the scale of small hills and the narrow extent of the southern part of these foothills. This typology would also have a dominant effect on more well-defined small hills and areas of more complex landform although more extensive shallow basins would be less susceptible in terms of scale.
- This landscape would be of High-medium sensitivity to wind turbines >150m high and Medium sensitivity to wind turbines 80-150m.

4 FORESTRY

Introduction

- 4.1 This chapter considers the potential implications of the Proposed Development on the woodland resource within the site boundary and its long-term management. This chapter was prepared by DGA Forestry LLP. The forestry assessment has identified that areas of forestry would require to be felled for the construction and operation of the Proposed Development. Proposed on-site replanting and additional planting of native woodland results in an increase in the area of stocked woodland within the Proposed Development site boundary.
- 4.2 Forestry is not regarded as a receptor for Environmental Impact Assessment (EIA) purposes. Commercial forests are a dynamic environment and their structure continually undergoes change due to the following:
- normal felling and restocking by the landowner;
 - natural events, such as storm damage, pests or diseases; and
 - external factors, such as a wind farms or other development.
- 4.3 This chapter therefore describes:
- the plans as a result of the Proposed Development for felling, restocking and forest management practices;
 - the process by which these were derived; and
 - the changes to the physical structure of the forestry within the site boundary.
- 4.4 This chapter discusses the issue of forestry waste arising from the Proposed Development.
- 4.5 The forestry proposals are interrelated with environmental effects, which are assessed separately in other chapters of the Original EIA. This chapter should therefore be read in conjunction with other chapters from the Original EIA, for example: Chapter 4: Design Evolution; Chapter 6: Landscape and Visual; and Chapter 12: Hydrology, Geology and Hydrogeology as they are interrelated to the proposed changes in the forest structure. This chapter should also be read in conjunction with Chapter 5: Ecology and Chapter 6: Ornithology of this Comparative EIA.
- 4.6 The responsibility for the management of the remainder of the forest out with the site boundary lies with the landowners and therefore the wider felling operations, restocking, and aftercare operations within these areas do not form part of the Proposed Development for which consent is sought.
- 4.7 The forestry proposals have been developed to:
- identify areas of forest to be removed for the construction and operation of the Proposed Development;
 - identify those areas which may or may not be replanted as part of the Proposed Development; and

- propose management practices for the forestry works.

4.8 In general, throughout this chapter data labelled 'baseline' refers to the current crop composition and any existing plans without any modification as a result of the Proposed Development. Data labelled 'Proposed Development' refers to the forestry plans incorporating the Proposed Development infrastructure.

4.9 This chapter is structured as follows:

- Planning, Policy and Guidance;
- Forestry Study Area;
- Forest Plans;
- Development of the Wind Farm Forest Plan;
- Baseline;
- Proposed Development Forest Plan;
- Requirement for Compensatory Planting;
- Forestry Waste;
- Forestry Management Practices;
- Conclusion; and
- Non-Technical Summary.

Planning Policy and Guidance

4.10 Relevant overarching planning policies for the proposed development are detailed within Chapter 3: Renewable Energy and Planning Policy of this Comparative EIAR. A desktop study was undertaken drawing upon published National, Regional and local level publications, assessments and guidance to establish the broad planning and forestry context within which the Proposed Development is located.

4.11 Forestry related policies and documents listed below have been considered within the forestry assessment. The following section provides an outline of those planning and other policies which are relevant to the proposed development, and in particular to forestry.

Forestry and Land Management (Scotland) Act 2016

4.12 Until 1st April 2019, the Scottish Ministers owned the National Forest Estate (NFE), provided funding and had responsibility for forestry strategy and policy, but the management of the NFE and delivery of forestry functions had been the responsibility of the Forestry Commissioners.

4.13 The Forestry Commission was a cross-border public authority and a United Kingdom non-ministerial department with a statutory Board of Commissioners. The Commission was made up of a number of parts, including in Scotland:

- Forest Enterprise Scotland (FES), which carried out forestry operations and managed the NFE on Scottish Ministers' behalf; and

- Forestry Commission Scotland (FCS), which was responsible for the other forestry functions in Scotland.
- When full devolution of forestry to the Scottish Government was completed on 1st April 2019, FCS and FES became two new agencies of the Scottish Government:
- Scottish Forestry (SF), responsible for regulatory, policy and support functions; and
- Forestry and Land Scotland (FLS), responsible for the management of the NFE and any other land managed for the purposes of the Forestry and Land Management (Scotland) Act 2018.

4.14 With the introduction of the Forestry and Land Management (Scotland) Act 2018 and its associated Regulations on 1st April 2019, the old regulatory regime of felling control under the Forestry Act 1967 was repealed in Scotland. From 1st April 2019, anyone wishing to fell trees in Scotland requires a Felling Permission issued by SF, unless an exemption applies or another form of felling approval such as a felling licence (including a forest plan) has previously been issued.

4.15 Under the new Regulations felling which is authorised by planning permission consent continues to be exempt from the Regulations and does not require a Felling Permission issued by SF.

Scotland's Forestry Strategy 2019-2029

4.16 Scotland's Forestry Strategy 2019 – 2029 (SFS) , was published in 2019 after a consultation period. The Strategy provides an overview of contemporary Scottish forestry; presents the Scottish Government's 50-year vision for Scotland's forests and woodlands; and sets out a 10-year framework for action.

4.17 The vision is that "...in 2070, Scotland will have more forests and woodlands, sustainably managed and better integrated with other land uses. These will provide a more resilient, adaptable resource, with greater natural capital value, that supports a strong economy, a thriving environment, and healthy and flourishing communities."

4.18 It lists a number of objectives summarised below:

- increase the contribution of forests and woodlands to Scotland's sustainable and inclusive economic growth;
- improve the resilience of Scotland's forests and woodlands and increase their contribution to a healthy and high quality environment; and
- increase the use of Scotland's forest and woodland resources to enable more people to improve their health, well-being and life chances.

4.19 It further describes the priorities as:

- ensuring forests and woodlands are sustainably managed;
- expanding the area of forests and woodlands, recognising wider land-use objectives;
- improving efficiency and productivity, and developing markets;
- increasing the adaptability and resilience of forests and woodlands;
- enhancing the environmental benefits provided by forests and woodlands; and
- engaging more people, communities and businesses in the creation, management and use of forests and woodlands.

4.20 There are ambitious targets included within the SFS for new woodland creation:

- 10,000 hectares (ha) per year in 2018;
- 12,000 ha per year from 2020/21;
- 14,000 ha per year from 2022/23; and
- 15,000 ha per year from 2024/25.

4.21 The stated objective is to increase Scotland's woodland cover from 18.5% in 2018 to 21% by 2032.

National Planning Framework 4

4.22 National Planning Framework 4 (NPF4) was laid before the Scottish Parliament on 8th November 2022. The Scottish Parliament voted to approve NPF4 on 11 January 2023 and it was adopted by the Scottish Ministers on 13 February 2023. NPF4 states that development proposals involving woodland removal will only be supported where they will achieve significant and clearly defined additional public benefits in accordance with relevant Scottish Government policy on woodland removal and, where woodland is removed, compensatory planting will most likely be expected to be delivered.

4.23 It further states that development proposals on sites which include an area of existing woodland or land identified in the relevant Forestry and Woodland Strategy as being suitable for woodland creation will only be supported where the enhancement and improvement of woodlands and the planting of new trees on the site (in accordance with the Forestry and Woodland Strategy) are integrated into the design.

Right Tree in the Right Place

4.24 'Right Tree in the Right Place - Planning for Forestry & Woodlands' 2010 sets out detailed guidance to planning authorities when considering development proposals involving forestry and woodland. It advises that planning authorities should:

- assess the current and likely future public benefits (social, economic and environmental) deriving from the existing woodland;
- determine whether the development should be modified or the woodland redesigned to avoid or reduce woodland loss (e.g. by accommodating new development within 'open space' within woodlands);
- where woodland loss cannot be avoided, assess the public benefit of a Proposed Development to see if it would justify the loss of the woodland;
- consider whether any loss of woodland should be mitigated by compensatory planting; and
- consider whether any felling consent needs to specify the timing of forestry operations to avoid disturbance to wildlife present on the Proposed Development.

4.25 If an authority decides that a development proposal involving woodland loss should receive planning permission, it should specify the precise area of felling permitted and ensure that planning conditions and/or agreements would ensure the provision of any compensatory planting which is required.

Control of Woodland Removal Policy

- 4.26 In parallel with the SFS and other national policies on woodland expansion, there is a strong presumption against permanent deforestation unless it addresses other environmental concerns. In Scotland, such deforestation is dealt with under the Scottish Government's 'Control of Woodland Removal Policy' 2009. The guidance relating to the implementation of the policy was revised and updated in 2019.
- 4.27 The purpose of the policy is to provide direction for decisions on woodland removal in Scotland. The policy document lays out the background to the policy, places it into the current policy and regulatory context, and discusses the principles, criteria and process for managing the policy implementation. The following paragraphs summarise the policy relevant to the Proposed Development.
- 4.28 The principal aims of the policy include:
- to provide a strategic framework for appropriate woodland removal; and
 - to support climate change mitigation and adaptation in Scotland.
- 4.29 The guiding principles behind the policy include:
- there is a strong presumption in favour of protecting Scotland's woodland resources; and
 - woodland removal should be allowed only where it would achieve significant and clearly defined additional public benefits. In appropriate cases, a proposal for compensatory planting may form part of this balance.
- 4.30 Woodland removal, without a requirement for compensatory planting, is most likely to be appropriate where it would contribute significantly to:
- enhancing priority habitats and their connectivity;
 - enhancing populations of priority species;
 - enhancing nationally important landscapes, designated historic environments and geological Sites of Special Scientific Interest (SSSI);
 - improving conservation of water or soil resources; or
 - public safety.
- 4.31 Woodland removal, with compensatory planting, is most likely to be appropriate where it would contribute significantly to:
- natural threats to forests or other land; or
 - helping Scotland mitigate and adapt to climate change;
 - enhancing sustainable economic growth or rural/community development;
 - supporting Scotland as a tourist destination;
 - encouraging recreational activities and public enjoyment of the outdoor environment;
 - reducing increasing the social, economic or environmental quality of Scotland's woodland cover.
- 4.32 The consequences of the policy are stated as:

- minimising the inappropriate loss of woodland cover in Scotland;
- enabling appropriate woodland removal to proceed with no net loss of woodland - related public benefits other than in those circumstances detailed in the policy; and
- facilitating achievement of the Scottish Government's woodland expansion ambition in a way that integrates with other policy drivers (such as increasing sustainable economic growth, tackling climate change, rural/community development, renewable energy and biodiversity objectives).

4.33 Addressing the policy requirements can be met through changes to forest design, increasing designed open space, changing the woodland type, changing the management intensity, or completing off site compensation planting.

Woodland Strategy

- 4.34 The Dumfries and Galloway Forestry and Woodland Strategy (DGFWS) supports national policies whilst integrating with other Dumfries and Galloway Council (DGC) strategies and plans. It provides a framework for guiding forestry and woodland practice within Dumfries and Galloway. It is intended to guide both woodland creation and the restructuring and management of existing forests and woodlands, to maximise the benefits for the local economy, communities and environment. The strategy supports Scottish Ministers' desire to see an expansion in woodland cover, delivering multiple benefits across the country.
- 4.35 The DGFWS forms Supplementary Guidance to the Local Development Plan. It supersedes the Dumfries and Galloway Indicative Forestry Strategy Technical Paper No. 4; the Forestry Strategy Diagram, which forms part of the Dumfries and Galloway Structure Plan (approved 1999); and the Galloway and Langholm/Lockerbie Local Forestry Framework (2000). It does not supersede the 'Landscape Design Guidance for Forests and Woodlands in D&G' (SNH/DGC 1998).
- 4.36 In DGFWS Paragraph 4.32, the DGFWS recognises that the region has attracted a lot of interest from wind energy developers and that many afforested areas are also potentially suitable locations for windfarms. It states that integrating wind energy developments into wooded areas can have advantages in that the visual impacts of infrastructure may be screened or softened by planting whilst contributing to overall forest design objectives.
- 4.37 This has resulted in a policy within the DGFWS (page 23): LAN 9 "Work with emerging guidance on integrating wind energy developments within forest landscapes."
- 4.38 Under the Theme of 'Woodlands, Forestry and Climate Change' one of the key policy objectives, of the DGFWS, is to encourage effective development of renewable energy from forests in the form of biomass wood fuel and the integration of appropriate renewable energy schemes within forests and woodlands.
- 4.39 Paragraph 6.13 of the DGFWS states that there may be potential within some of the existing forested areas for the siting of windfarms; however, this needs to be balanced against the loss of trees and carbon emissions from their construction. Both the Local Development Plan and the Wind Energy Supplementary Guidance emphasise the need for replacement planting of woodland lost as a result of development.

- 4.40 Paragraph 6.14 of the DGFWS identifies that the access and transportation needs of both the timber industry and windfarm construction should be planned for in a comprehensive and inclusive manner.
- 4.41 This has resulted in a policy within the DGFWS: DRE 2 (page 39): "Develop effective local guidance and practice to minimise woodland loss from renewable energy developments." The DGFWS goes on to state in Paragraph 8.5 that locating windfarms or turbines within woodland or productive forests can lead to a loss of woodland cover and refers specifically to the Scottish Government's policy on 'The Control of Woodland Removal'.

Forestry Study Area

- 4.42 The Forestry Study Area (FSA), as shown on Figure 4.1, extends to approximately 1,120.7 ha and comprises of privately owned and managed woodlands. These woodlands are covered by a Long Term Forest Plan, reference: 99FGS34016. This Plan was renewed in 2023.
- 4.43 The forests contain a range of woodland types due to the forest plan restructuring programme together with areas of unplanted land and open ground. The crops are comprised largely of commercial conifers with areas of both mixed conifers and mixed broadleaves and open ground. Further information on the composition of the woodlands in the FSA is provided in the baseline description below.

Forest Plan

- 4.44 One of the original key objectives of the Forestry Commission was forest expansion, in both state and private forests, to produce a strategic reserve of timber, and consequently, a limited range of species was planted. More recently, greater emphasis has been placed on developing multi-purpose forests, which require a restructuring of age and species in existing woodlands. Restructuring is achieved through the forest planning process.
- 4.45 A Forest Plan relates to individual forests or groups of woodlands. It describes the woodlands, places them in context with the surrounding area, and identifies issues that are relevant to the woodland or forest. Forest Plans describe how the long-term strategy would meet the management objectives of the owner, the criteria of the UK 'Forestry Standard' (UKFS) and the UK 'Woodland Assurance Standard 4th Edition' (UKWAS), under which the woodlands would be managed if certificated.
- 4.46 The development of a Forest Plan involves a scoping exercise whereby the views of Statutory Consultees, neighbours and stakeholders are sought, resulting in an agreed Scoping Report. The results of the scoping exercise are incorporated into the Forest Plan. A Forest Plan covers social and environment aspects, such as conservation, archaeology, landscape and the local community, in addition to forestry and silvicultural considerations.
- 4.47 Restructuring of age class and species are important factors in this process to ensure proposals meet the current standards. A Wind Farm Forest Plan is prepared along the same principles with the relevant information being provided by other members of the project team. A baseline Forest Plan (without wind farm) will typically contain felling and

restocking proposals covering a 10 year period in detail, with outline proposals for the remainder of the forest.

- 4.48 Restructuring presents forest managers with many challenges and opportunities, particularly in relation to the management of potential catastrophic windblow due to storm damage. The forest planning process allows forest managers to review and revise proposals in a structured way to take account of such external factors. The inclusion of a wind farm within the forest is an example of one such external factor.
- 4.49 The current guidelines require diversification of species and woodland types as part of the forest planning process, specifically an increase in the proportion of broadleaf woodland, other conifers, and open ground. The incorporation of the Proposed Development into the forest would result in further restructuring of the forest.

Development of a Wind Farm Forest Plan

Introduction

- 4.50 This Section describes the process by which a typical Wind Farm Forest Plan is prepared. Existing crop information is collated from the landowner including current forestry information on species, planting year and felling and restocking plans where available. This is followed by field surveys, in this case instance undertaken in 2024, and further desk-based assessment as necessary.
- 4.51 Details of wind turbine locations, new tracks, storage compounds, borrow pits, substation compound and other infrastructure are provided by other disciplines within the project team. This data would then be amalgamated with the forestry data to construct the forestry proposals for the Proposed Development.
- 4.52 The location of wind turbines and infrastructure is heavily influenced by environmental constraints and technical considerations (e.g. sensitive habitats, wind resource capture, ground conditions, etc). The final location of wind turbines and infrastructure takes the various site constraints into consideration. Land management requirements associated with the construction of the Proposed Development would also be incorporated into the forestry proposals, where appropriate.
- 4.53 Within forests and woodlands, areas of crop may require to be felled to accommodate the construction and operation of the Proposed Development. The felling programme for the Proposed Development would largely be driven by technical constraints relating to both forestry and development.
- 4.54 In this case, taking into account the ecological constraints described at Chapter 5 of this Comparative EIAR, a 3.1 ha (100 metre (m) radius) 'keyhole' was adopted around wind turbines. These keyholes are areas that require to be felled for construction, operation and environmental mitigation.
- 4.55 A 10 m buffer has been applied around each other item of temporary and permanent infrastructure, in addition to the area required for the infrastructure. An indicative 30 m corridor has been applied to all new access tracks and upgraded existing tracks to be

used for wind turbine delivery and construction purposes. This would be reviewed at the detailed design stage post consent and prior to construction.

Wind Farm Felling Plan

- 4.56 Felling required for a Proposed Development can be divided into two categories:
- firstly, that required during the construction phase of the Proposed Development, which for the purposes of this assessment, has been anticipated as commencing in 2027; and
 - secondly, felling required during the operational period of the Proposed Development. In this case there is no felling required outwith that required for the construction phase.
- 4.57 The crops were assessed to identify those areas which would require to be felled for a number of reasons as described above. Due to the crop growth rates and current crop height, it has been assessed that the infrastructure within woodland areas would largely require keyholing into younger crops and in a few small areas of mature crops, clear felling of entire coupes back to either a wind farm edge or management boundaries. Where entire coupes are to be felled, the infrastructure would be incorporated into the Wind Farm Species Restocking Plan as described below.
- 4.58 Additional minor felling would be required for forest management purposes, for example, to reduce the risk of subsequent windblow; to reduce coupe isolation and fragmentation; and to ensure access for future forest operations.
- 4.59 The resultant Wind Farm Felling Plan shows which woodlands within the FSA would be felled as a result of the Proposed Development and when this felling would take place.

Wind Farm Species Restocking Plan

- 4.60 The Wind Farm Species Restocking Plan shows which woodlands would be restocked and with which species. The majority of the areas to be felled for the Proposed Development would be restocked except for the areas detailed below:
- land required for permanent infrastructure subject to the buffer zones described above; and
 - land to be left unplanted for forest management or forest design purposes.
- 4.61 It has been assumed that, where possible, some temporary infrastructure such as edges of re-profiled borrow pits would be re-instated and available for restocking post construction. To ensure that the forestry establishes successfully, the soil should be restored to a depth of 1 m.
- 4.62 In preparing the Wind Farm Species Restocking Plan, a number of points would be considered as detailed below:
- fragmentation of coupes to be minimised as much as possible;
 - coupe shapes would be modified to ensure that access for future forestry operations, principally harvesting, is maintained; and
 - coupe shapes and edges would be modified to follow good practice.

- 4.63 Species composition was considered taking into account the Proposed Development operational requirements such as separation distances between wind turbines and forest edges, landowner objectives and forestry policies.
- 4.64 The wind farm forestry felling and restocking proposals have been assessed by each of the separate environmental disciplines / consultants as part of the EIA process where required, and the effects are reported in individual chapters of this EIA Report and their supporting appendices.

Baseline

Baseline Conditions

- 4.65 The study area consists of conifer forestry located approximately 5m east of St John's Town of Dalry in the south east of Scotland.
- 4.66 An initial desk-based assessment identified there are woodlands within the Proposed Development area recorded as native woodland in the Native Woodland Survey of Scotland (Forestry Commission Scotland, 2013) , there are also areas identified in the Ancient Woodland Inventory Scotland (Scottish Natural Heritage, 2010). No physical infrastructure is located within these areas, however buffer zones do overlap.
- 4.67 A site assessment has identified an area of windblow (see Figure 4.9 'Windblow Area') extending to 10.8 ha. This is due to historic high wind events and localised site conditions; it is not expected that this area of windblow will extend any further and is isolated to that particular coupe.

Baseline Planting Year/Age Class Structure

- 4.68 Many woodlands established in the mid to late 1900's, were planted in large contiguous blocks, often over a limited number of years and with a limited range of species. Such woodlands develop poor structural diversity, especially on upland sites. Restructuring the age class and species of such forests is desirable and would yield both forest management and environmental benefits.
- 4.69 The woodlands within the FSA are currently undergoing restructuring by felling and restocking and as a result the structural diversity of the woodlands is relatively diverse. Their age class is detailed below in Table 4.1 'Baseline Age Class Composition' and shown in Figure 4.2 (Comparative EIAR Volume II).
- 4.70 Please note there may be minor discrepancies in the totals within the tables contained in this chapter. This is due to rounding of the individual values for the different parameters in the database.

Table 4.1: Baseline Age Class Composition

Age	Area (ha)	Area (%)
n/a	237.0	21.2
<10 years old	370.1	33.0

10-20 years old	251.7	22.5
31-40 years old	172.7	15.4
41-50 years old	88.5	7.9
70 years +	0.6	0.1
Total	1,120.7	100.0

- 4.71 The current guidelines contained within the UKFS is that in forests characterised by a lack of diversity due to extensive areas of even-aged trees, stands adjoining felled areas should be retained for 7 years or until the restocking of the first coupe has reached a minimum height of 2 metres (m). For planning purposes this is likely to be between 5 and 15 years depending on establishment success and growth rates. It is recognised that in large even-aged plantations, especially in the uplands, restructuring age class structure to meet this target may take more than one rotation.

Species Composition

- 4.72 The current baseline species composition of the woodlands within the FSA is shown in Figure 4.3 (Comparative EIAR Volume II) and illustrated in Table 4.2 below.

Table 4.2: Baseline Species Composition

Species	Area (ha)	Area (%)
Sitka spruce	706.3	63.0
Sitka spruce/Other conifer	37.5	3.3
Other conifer	58.4	5.2
Mixed woodland	7.7	0.7
Mixed broadleaves	73.8	6.6
Open ground	212.6	19.0
Felled	24.4	2.2
Total	1,120.7	100.0

- 4.73 The main species are commercial conifers, principally Sitka spruce, which in pure or mixed stands, accounts for approximately 66% of the total FSA. Other conifers account for 5.2% of the FSA and broadleaf woodland 6.6%. Open ground and other land, including felled areas awaiting restock, accounts for approximately 21.2%.
- 4.74 The species composition reflects the practice and guidance which prevailed at the time the woodlands were established. Restructuring as part of a long-term forest plan would aim to introduce an increased proportion of broadleaves and other conifers into the woodland composition.

Baseline Felling Plan

- 4.75 The baseline felling plan forms part of the current Forest Plans prepared by the forest managers. It considers the requirement to restructure the age class of even aged forests

as described above. The baseline felling plan is illustrated in Figure 4.4 and presented in Table 4.3 below. The data is summarised in 5-year bands as per standard practice.

Table 4.3: Baseline Felling Phases

Fell Phase	Area (ha)	Area (%)
No Felling	212.6	19.0
Phase 1: 2023-2027	135.2	12.1
Phase 2: 2028-2032	60.0	5.4
Phase 3:2033-2037	22.1	2.0
Phase 4: 2038-2042	125.7	11.2
Long Term Retention	27.6	2.5
Natural Reserve	58.7	5.2
Outside Plan Period	478.9	42.7
Total	1,120.7	100.0

- 4.76 A proportion of the FSA is designated as “No Felling” due either to earlier felling and restocking as part of the Forest Plan; the age or growth rates of the crop. The prospective felling year of these areas lies outside of the current forest plan period.
- 4.77 A large area of the FSA are designated as “Outside Plan Period”. These areas are generally immature crops whose prospective felling year lies outside of the current forest plan period.
- 4.78 Other areas within the FSA have been designated as Natural Reserves (NR). These are areas which are considered of high conservation interest or potential and are managed by minimum intervention unless alternative management has higher conservation or biodiversity value. The identification NRs is part of the requirements of UKWAS and the UKFS.
- 4.79 The baseline felling programme is designed to provide the required separation between felling coupes, where possible. This may take more than one rotation to achieve, especially in the uplands where wind farm boundaries between felling coupes are limited.

Table 4.4: Baseline Restocking Species Composition

Species	Area (ha)	Area (%)
Sitka spruce	680.0	60.7
Sitka spruce/Other conifer	26.8	2.4
Other conifer	116.9	10.4
Mixed woodland	6.5	0.6
Mixed broadleaves	74.5	6.6
Open ground	215.9	19.3
Total	1,120.7	100.0

4.80 The baseline restocking proposals illustrate how the forest would be structured at the end of the Forest Plan period if the entire plan was implemented. Table 4.5 below compares the baseline current species composition and the baseline restocking species composition at the end of the plan period without the implementation of the Proposed Development.

Table 4.5: Baseline Species Comparison

Species	Baseline Current Species	Baseline Restocking Species	Variance	Variance
	Area (ha)	Area (ha)	Area (ha)	Area (%)
Sitka spruce	706.3	680.0	-26.3	-2.3
Sitka spruce/Other conifer	37.5	26.8	-10.7	-1.0
Other conifer	58.4	116.9	58.6	5.2
Mixed woodland	7.7	6.5	-1.1	-0.1
Mixed broadleaves	73.8	74.5	0.7	0.1
Open ground	212.6	215.9	3.3	0.3
Felled	24.4	0.0	-24.4	-2.2
Total	1,120.7	1,120.7	0.0	0.0

4.81 The changes between the current baseline current species composition and that contained within the baseline restocking plan are discussed below:

- the proportion of primary conifer crops (Sitka spruce, Sitka spruce/Other conifer) reduces by 37 ha; and
- the area of broadleaf woodland increases by 0.7 ha.

4.82 The majority of these changes reflect the ongoing proposed restructuring of the first rotation crops to meet current guidelines resulting in a decrease in the primary conifer species, Sitka spruce, in favour of broadleaves and other conifer species.

Proposed Development Forest Plan

Introduction

4.83 The effect of the Proposed Development on the structure of the woodlands within the FSA has been compared against the Baseline Forest Plan. This has concentrated on changes to the Felling Plan and Restocking Plan required to accommodate the Proposed Development.

Proposed Development Felling Plan

4.84 The Proposed Development Felling Plan is shown across two figures. Figure 4.6 (Comparative EIA Volume II) identifies the felling required for construction of the Proposed Development and the advanced felling as a result of the Proposed

Development, Figure 4.7 shows the construction felling within the felling phase plan, these data are summarised in Table 4.6 and Table 4.7 below.

Table 4.6: Felling Required for Construction

Felling Type	Area (ha)	Area (%)
No Felling – open ground	212.6	19.0
Infrastructure felling	43.1	3.8
Advanced Felling	54.5	4.9
No Felling – woodland	810.4	72.3
Total	1,120.7	100.0

- 4.85 The total felling required to accommodate construction of the Proposed Development, including infrastructure and advanced felling, totals 97.6 ha.

Table 4.7: Wind farm Felling Plan

Fell Phase	Area (ha)	Area (%)
No Felling	212.6	19.0
Phase 1: 2023-2027	221.0	19.7
Phase 2: 2028-2032	16.6	1.5
Phase 3: 2033-2037	21.9	2.0
Phase 4: 2038-2042	113.4	10.1
Long Term Retention	25.0	2.2
Natural Reserve	52.0	4.6
Outside Plan Period	458.2	40.9
Total	1,120.7	100.0

- 4.86 Table 4.8 below compares the baseline and windfarm felling plans.

Table 4.8: Felling Plan Comparison

Fell Phase	Baseline Felling Plan	Wind farm Felling Plan	Variance	Variance
	Area (ha)	Area (ha)	Area (ha)	Area (%)
No Felling	212.6	212.6	0.0	0.0
Phase 1: 2023-2027	135.2	221.0	85.8	7.7
Phase 2: 2028-2032	60.0	16.6	-43.4	-3.9
Phase 3: 2033-2037	22.1	21.9	-0.2	0.0
Phase 4: 2038-2042	125.7	113.4	-12.3	-1.1
Long Term Retention	27.6	25.0	-2.5	-0.2
Natural Reserve	58.7	52.0	-6.7	-0.6

Outside Plan Period	478.9	458.2	-20.7	-1.9
Total	1,120.7	1,120.7	0.0	0.0

4.87 There would be advanced felling of 85.8 ha during Phase 1: 2023-2027, resulting from the construction of the proposed Development. This is balanced out by reduced felling in subsequent periods.

4.88 Felling is required for infrastructure and construction of the proposed Development. Where possible the proposed Development infrastructure will be "keyholed" into the crops, where only the crops required for the infrastructure and its associated buffer zones will be cleared as detailed earlier. Where this is not possible the crops will be felled back to the nearest wind farm edge or management boundary and the proposed Development infrastructure will be keyholed into the restocking.

Proposed Development Restocking Plan

4.89 The Baseline Restocking Plan has been amended to integrate the Proposed Development infrastructure requirements into the forest design and to take account of the site conditions. The Proposed Development Restocking Plan is shown in Figure 4.8 (EIAR Volume II) and summarised in Table 4.9. Wind farm open ground refers to the permanent loss of crop to permanent infrastructure only of the Proposed Development.

Table 4.9: Proposed Development Restocking Species Plan Composition

Species	Area (ha)	Area (%)
Sitka spruce	648.3	57.8
Sitka spruce/Other conifer	26.6	2.4
Other conifer	111.2	9.9
Mixed woodland	4.9	0.4
Mixed broadleaves	70.7	6.3
Open ground	215.9	19.3
Wind farm open ground	43.1	3.8
Total	1,120.7	100.0

4.90 The Baseline and Wind Farm Restocking Plans have been compared to assess the changes that construction of the Proposed Development would have on the species composition of the forests. These data are presented in Table 4.10.

Table 4.10: Comparison of Restocking Plans

Species	Baseline Restock Species Area (ha)	Proposed Development Restock Species Area (ha)	Variance Area (ha)	Variance Area (%)
Sitka spruce	680.0	648.3	-31.7	-2.8

Sitka spruce/Other conifer	26.8	26.6	-0.2	0.0
Other conifer	116.9	111.2	-5.8	-0.5
Mixed woodland	6.5	4.9	-1.6	-0.1
Mixed broadleaves	74.5	70.7	-3.8	-0.3
Open ground	215.9	215.9	0.0	0.0
Wind farm open ground	0.0	43.1	43.1	3.8
Total	1,120.7	1,120.7	0.0	0.0

- 4.91 The change in area of stocked woodland in the forests due to the Proposed Development is shown in Table 4.11 below.

Table 4.11: Stocked Woodland Area Comparison

Woodland Types	Baseline	Proposed Development	Variance	Variance
	Restock Species	Restock Species		
	Area (ha)	Area (ha)	Area (ha)	Area (%)
Stocked	904.7	861.6	-43.1	-3.8
Unstocked	215.9	259.0	43.1	3.8
Total	1,120.7	1,120.7	0.0	0.0

- 4.92 The changes in the structure of the woodlands due to the Proposed Development can be summarised as follows:

- there would be a net reduction in the area of Sitka spruce (whether pure or in a mix) of 31.9 ha;
- there would be a decrease in the area of broadleaf woodland of 3.8 ha;
- there would be a decrease in the area mixed conifer woodland of 5.8 ha;
- Wind farm permanent open ground would total 43.1 ha; and
- the net reduction in stocked woodland area within the FSA would be 43.1 ha equivalent to 3.8% of the FSA.

- 4.93 A comparison between the previously consented chapter and this current chapter highlights changes to the overall woodland loss due to the Proposed Development, these changes are due to several factors:

- new turbine positions all located within their consented micro-siting allowance;
- reorientation of crane pads to facilitate the new turbine positions;
- changes to the consented access tracks to facilitate the new turbine positions and;
- changes to infrastructure buffers.

- 4.94 The infrastructure layout has been amended to incorporate a more advantageous internal design within the forest, providing increased resilience to the remaining and future standing crops.

Requirement for Compensatory Planting

- 4.95 As a result of the construction of the Proposed Development, there would be a net loss of woodland area. The area of stocked woodland in the FSA would decrease by 43.1 ha.
- 4.96 In order to comply with the criteria of the Scottish Government's Control of Woodland Removal Policy, compensation planting would be required. The Applicant is committed to providing appropriate compensatory planting. The extent, location and composition of such planting to be agreed with SF, taking into account any revision to the felling and restocking plans prior to the commencement of construction of the Proposed Development.

Forestry Waste

- 4.97 The Scottish Environment Protection Agency (SEPA) guidance document WST-G-027, 'Management of Forestry Waste' (SEPA, 2017) highlights that all waste producers have a statutory duty to adopt the waste hierarchy as per the Waste (Scotland) Regulations 2012 (the Scottish Government, 2012) , which amended Section 34 of the Environmental Protection Act (EPA) 1990 (duty of care) (UK Government, 1990) . This places a specific duty on any person who produces, keeps or manages (controlled) waste to take all such measures available to them to apply the waste hierarchy in Article 4 (1) of the revised Waste Framework Directive (rWFD) , which is:
- prevention;
 - preparing for re-use;
 - recycling;
 - other recovery, including energy recovery; and
 - disposal, in a way which delivers the best overall environmental outcome.
- 4.98 Further guidance is contained in the document LUPS-GU27, 'Use of Trees Clear Felled to Facilitate Proposed Development on Afforested Land'" (SEPA, 2014) .
- 4.99 A hierarchy of uses for forestry materials is proposed, derived from the waste hierarchy contained within the Regulations, summarised as follows:
- prevention via the production of timber products and associated materials for use in timber and other markets;
 - the re-use of materials on-site for a valid purpose, where such a use exists e.g. track construction including floating tracks;
 - there is no valid re-cycling use for forestry residues;
 - other recovery via collection and use as biomass for energy recovery or other markets, where not included above; and
 - where no valid on-site or off-site use can be found for the material, disposal would be in a way that is considered to deliver the best overall environmental outcome.
- 4.100 Where no valid on-site or off-site use, or other disposal method, can be found for the material, it should be regarded as waste and handled accordingly. Disposal of timber residues as waste in or on land requires a landfill permit or a waste exemption licence and should be considered the option of last resort.

- 4.101 As discussed above, the crops will be replanted except where the land is required for infrastructure associated with the proposed development. Brash would be left in situ to provide nutrients for the next rotation where the crops are being replanted as per standard forestry practice. Where crops are not being replanted brash would be removed and treated in line with the proposed hierarchy described above.
- 4.102 Stumps would be left in situ as per good practice guidance, except where excavated as part of the construction activities. Excavated stumps would be treated in line with the proposed hierarchy described above.
- 4.103 In areas of lower yielding crops, into which the proposed development infrastructure would be keyholed, the objective would be to recover as much merchantable timber as possible. Failing that to treat them in line with the hierarchy outlined above. Where suitable, whole trees would be extracted and used in the biomass market. As a result, it is anticipated the forestry waste arising from the works will be minimal.
- 4.104 It is proposed that full consideration and further clarification on this issue would be included in a Forestry Waste Management Plan to form part of the Construction Environmental Management Plan (CEMP) following receipt of planning consent and prior to commencement of construction.

Forestry Management Practices

Crop Clearance

- 4.105 Areas of crops of sufficient tree size and standing volume would be harvested conventionally. Timber operations would be undertaken with conventional harvesting and forwarding equipment utilising, as required, flotation tracks.
- 4.106 Stemwood down to 7 centimetres (cm) or below would be removed from site and sold into the timber markets. The harvester would maximise timber recovery wherever possible, this would result in the maximum timber volume being recovered to ensure the volume used in the brash mats is kept to a minimum. On wetter ground the harvester would build stronger brash mats to ensure there would be minimal damage to the peat and soil structure by the forwarder during extraction. On soft ground, the bottom layers of brash mats become embedded into the soil and removal could result in more environmental damage than leaving the material to naturally degrade.
- 4.107 In areas of young or lower yield class crops, where little or no merchantable timber would be recovered, a number of options could be utilised depending on the factors prevailing at the time of clearance. The methodology used would depend on tree size; site conditions; the availability of suitable equipment; and the markets prevailing at the time of the works being carried out. Where there is suitable access and ground conditions the trees could be whole tree harvested and extracted to roadside for chipping as biomass.
- 4.108 Where trees are very small due to age or poor growth it may be more viable to fell the crop manually using scrub cutters or chainsaws. The end use of the material would depend on the factors mentioned above but in some cases there would be no recoverable material. Where material was recoverable it could potentially be used on-

site in the base of floating roads; extracted and processed for biomass; or used for ecological enhancement if applicable.

- 4.109 Stumps would be left in situ as per the guidance contained in the Forestry Commission Research Note "Environmental effects of stump and root harvesting" (Forestry Commission, 2011) except where they would be removed for borrow pits, excavated tracks, wind turbine foundations and other infrastructure requiring excavation. Such material would be treated as described above.

Restocking / Planting Methodology

- 4.110 Wind Farm Restocking would be carried out to current standard practice, the forest manager's internal guidance and practices and in accordance with the guidelines contained in the UKFS and UKWAS as a minimum, where applicable. The methodology would vary depending on the type of restocking being carried out. The following information is provided for guidance as to the restocking methodology which may be adopted.

- 4.111 On commercial conifer areas the methodology would normally include:

- site preparation by machine cultivation and drainage;
- manual planting;
- subsequent follow-up establishment operations such as the replacement of failures, weeding and protection measures until the crops are satisfactorily established; and
- replanting would be carried out with the conifer species identified in the restocking plan at the minimum density of 2,500 trees per ha.

- 4.112 Restocking within the broadleaf woodland areas would be carried out to the same specification with the following changes:

- a lower planting density of 1,600 trees per ha; and
- the principal species would be mixed native broadleaves including, for example, downy and silver birch with small components of other species as appropriate to site such as oak, rowan, hazel, gean, grey willow, goat willow, alder and woody shrubs.

Aftercare Works

- 4.113 Aftercare establishment works would normally include, but are not limited to, the following:

- the woodlands would be beaten up (replacement of failures) to ensure satisfactory stocking levels by year 5, broadleaf woodlands by year 10;
- the woodlands would be weeded as necessary to ensure satisfactory establishment by year 5 / year 10 for broadleaf woodlands;
- the woodlands would be protected against pine weevils by management inspections and remedial treatment as necessary;
- the woodlands would be protected against browsing damage from wild and domestic animals;
- the woodlands would be protected against fire;
- fertiliser would be applied as necessary to ensure satisfactory establishment and growth; and

- other works as reasonably required ensuring satisfactory establishment of the woodlands.

Standards and Guidelines

- 4.114 All forestry operations would be carried out in strict accordance with current good practice and guidelines. This would include, but not be limited to:
- UK Forestry Standard (Forest Research, 2023);
 - Forest Industry Safety Accord Guides (or equivalent) (FISA, 2014) ; and
 - current relevant legislation including, but not limited to, Health and Safety at Work Act 1974 (UK Government, 2014) .

Conclusion

- 4.115 The total study area extends to 1,220.7 ha and is comprised of woodlands which are privately owned and managed.
- 4.116 Felling would be advanced on 97.6 ha for construction of the Proposed Development.
- 4.117 The species composition of the forest would change as a result of the Proposed Development forestry proposals. In particular, the area of Sitka spruce (whether pure or in a mix) would reduce by 31.7 ha.
- 4.118 The area of unplanted ground would increase and, as a result, there would be a net loss of woodland area of 43.1 ha.
- 4.119 In order to comply with the Scottish Government's Control of Woodland Removal Policy, compensation planting would be required to mitigate for the loss of woodland area. The Applicant is committed to providing appropriate compensatory planting. The extent, location and composition of such planting to be agreed with SF, taking into account any revision to the felling and restocking plans prior to the commencement of construction.

5 ECOLOGY

The Site and Locality

- 5.1 The revised Margree Wind Farm is located primarily within commercial forestry, with the forestry blocks being dominated by Sitka Spruce *Picea sitchensis* plantations of varying ages. Outwith the forestry blocks, the habitats present include upland acid grasslands, interspersed with flushes, marshy grassland and, where peat remains areas of mire and raised bog. The three main watercourses flowing through the Site are Margree, Blackwater and Regland Burns. Several water bodies are present within the Site, including Regland Loch and a number of small ponds.

Impact Assessment Methodology

Introduction

- 5.2 In order to determine the value of the habitats and species found through the ornithological surveys detailed in Chapter 6, and the impacts of the revised wind farm, the baseline and survey results were assessed against the criteria developed by the Chartered Institute of Ecology and Environmental Management (CIEEM 2019).
- 5.3 The method used in this assessment involved four key stages:
- Baseline studies;
 - Identification of Valued Ornithological/Ecological Receptors;
 - Identification and characterisation of potential impacts; and
 - Assessment of impact significance.
- 5.4 Further guidance on the assessment of effects, particularly pertaining to birds, has been taken from SNH guidance (SNH 2006 & SNH 2017). This guidance is specific to wind farm developments and therefore a combination of approaches with that given by CIEEM is deemed appropriate for an ornithological assessment of the revised Margree Wind Farm.

Baseline Studies

- 5.5 Baseline studies are conducted within the identified zone of influence of the revised Margree Wind Farm. To provide necessary context to the ornithological community present on or adjacent to the revised wind farm site, the zone was set at between 500m and 2km around the windfarm depending on the target species highlighted in each particular survey type (SNH 2017).
- 5.6 Baseline information about ornithological features, including international and national site designations, species populations, species assemblages and habitats, was primarily obtained from field surveys, but was also supported by desktop studies, consultation and existing ornithological data relevant to the wind farm site.

Identification of Valued Ornithological/Ecological Receptors

- 5.7 From amongst the species populations or species assemblages present within the zone of influence, of the revised wind farm, Valued Ornithological Receptors (VORs) and Valued Ecological Receptors (VERs) are identified. VORs/VERs are typically species of conservation that could be significantly affected by the revised wind farm.
- 5.8 The value of populations of species, species assemblages and habitats is evaluated with reference to:
- Their importance in terms of 'biodiversity conservation' value (which relates to the need to conserve representative areas of different habitats and the genetic diversity of species populations);
 - Any social benefits that species and habitats deliver (e.g. relating to enjoyment of flora and fauna by the public); and
 - Any economic benefits that they provide.
- 5.9 For the purposes of this assessment, sites, species populations, species assemblages and habitats have been valued using the following scale:
- International;
 - National;
 - Regional/County;
 - Local; and
 - Low.
- 5.10 Table 5.1 below provides definitions for the above criteria.

Table 5.1: Criteria for determining the nature conservation value of specific features.

Value of Feature	Key Examples
International	An internationally designated site or candidate site (SAC, cSAC, pSAC, Biogenetic Reserve) or an area which meets the designation criteria for such sites. Internationally significant and viable areas of a habitat type listed in Annex 1 of the Habitats Directive, or smaller areas of such habitat, which are essential to maintain the viability of a larger whole. Any regularly occurring, globally threatened species. A regularly occurring population of an internationally important species, which is threatened or rare in the UK, of uncertain conservation status. A regularly occurring, nationally significant population/number of any internationally important species.
National	A nationally designated site (e.g. SSSI, NNR) or a discrete area which meets the published selection criteria for national designation (e.g. SSSI selection guidelines) irrespective of whether or not it has yet been notified. A viable area of a UK BAP priority habitat, or smaller areas of such habitat which are essential to maintain the viability of a larger whole. A regularly occurring significant number/population of a nationally important species e.g. listed on the Wildlife and Countryside Act 1981 (as amended). A regularly occurring population of a nationally important species that is threatened or rare in the county or region. A feature identified as being of critical importance in the UK BAP.

Value of Feature	Key Examples
Regional/County	Viable areas of key habitat identified in the Regional or County BAP or smaller areas of such a habitat, which are essential to maintain the viability of the larger whole. Regional/county significant and viable areas of key habitat identified as being of regional value by statutory bodies. A regularly occurring significant population/number of any important species important at a regional/county level. Any regularly occurring, locally significant population of a species which is listed in a Regional/County RDB or BAP on account of its regional rarity or localisation. Sites of conservation importance that exceed the district selection criteria but that fall short of SSSI selection guidelines.
District	Areas of habitat identified in a District/City/Borough BAP or in the relevant Natural Area profile. Sites that the designating authority has determined meet the published ecological selection criteria for designation, including Local Nature Reserves selected on District/City/Borough ecological criteria. Sites/features that are scarce within the District/City/Borough or which appreciably enrich the District/City/Borough habitat resource. A diverse and/or ecologically valuable hedgerow network. A population of a species that is listed in a District/City/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation. A regularly occurring, locally significant number of a District/City/Borough important species during key phases of its life cycle.
Local	Areas identified in a Local BAP or the relevant natural area profile. Sites/features which are scarce in the locality or which are considered to appreciably enrich the habitat resource within the local context, e.g. species-rich hedgerows. Local Nature Reserves selected on Neighbourhood/Local ecological criteria. Significant numbers/population of a locally important species <u>e.g.</u> one which is listed on the Local BAP. Any species, populations or habitats of local importance.
Low	Habitats of moderate to low diversity which support a range of locally and nationally common species, the loss of which can be easily mitigated.

Sensitivity of Receptors

- 5.11 The impacts of the revised Development upon any species or feature are described within this report. The sensitivity of any species or feature to the Proposed Development must also be considered when determining the significance of any impact upon a particular species or habitat. This is based on the conservation value or importance of that species or habitat, as outlined in Table 5.2 below:

Table 5.2: Criteria for assessing the sensitivity of species, habitats and sites.

Sensitivity of Feature	Assessment Criteria
Very High	A species, population or habitat which is/are a designated feature of an SPA, SAC or SSSI.

High	Sites, habitats or species of at least national importance, as identified through field survey, desk survey or consultation or features are likely to be significantly affected by the Development.
Moderate	Sites, habitats or species of at least county importance, as identified through field survey, desk survey or consultation or features, although potentially affected, which would not suffer significant effects as a result of the Development.
Low	Sites, habitats or species of local or neighbourhood importance, as identified through field survey, desk survey or consultation or features which would not be significantly affected by the Development.

Impact Magnitude

- 5.12 The magnitude of each potential impact was determined using Table 5.3. The impact magnitude was also assessed based on whether the impact will be positive or negative and direct or indirect.

Table 5.3: Criteria for magnitude of impacts.

Magnitude of Impact	Assessment Criteria
Very Major	The proposed development will have effects which would result in a change in the integrity of an SPA, SAC or SSSI.
Major	The proposed development would have effects which would result in a change in the integrity of a site, or a change in the ability of a species to retain its current population levels (at a regional or higher level).
Intermediate	The proposed development would have effects which would alter key attributes of a site but which would not result in a change to a site's evaluation, or would result in changes in the distribution of a species but not affect its population status at a regional level.
Minor	The proposed development would have effects which would neither alter key attributes of a site nor change its evaluation, or would affect the distribution or status of a species at a local level.
Neutral/Negligible	No impact or the proposed development will have very minor effects which would neither alter key attributes of a development site nor change its evaluation, or will affect the distribution or status of a species at a local level.

Significance of Effect

- 5.13 The magnitude of impacts was compared against the value and sensitivity of particular features in order to determine the significance of effects the proposed windfarm is likely to have upon such features. It should be noted that such effects may be negative or positive. The matrix below (Table 5.4) was used to determine the significance of effects upon sites and species. Cells highlighted in light grey are classified as a significant effect for the purposes of this EclA.

Table 5.4: Matrix for assessing significance of effects.

Sensitivity of Feature	Magnitude of Impact				
	Very Major	Major	Intermediate	Minor	Neutral/ Negligible
Very High	Very Major	Major	Moderate/	Minor	Negligible

			Major		
High	Major	Major	Moderate/ Major	Minor	Negligible
Moderate	Major	Moderate/ Major	Moderate/ Minor	Minor	Negligible
Low	Moderate/ Major	Moderate/ Minor	Minor	Minor/ Negligible	Negligible

- 5.14 The impacts that will have a Very Major, Major or Moderate/Major negative effect upon a feature are considered to be significant, and measures will be put in place to mitigate or compensate for these effects where appropriate.
- 5.15 Effects that were assessed to be Minor/Negligible were subject to professional judgement as to whether the effect was indeed Minor or Negligible. In such cases, mitigation or compensation was included for effects where appropriate to help ensure that there is no net loss in biodiversity as a result of the revised wind farm.
- 5.16 The duration and reversibility of effects was also considered as a part of the assessment. The definitions used to describe the duration of the effects are explained in Table 5.5. The duration of effects is extremely variable and is dependent upon an individual or species tolerance towards an effect.

Table 5.5: Definitions of the duration of effects.

Effect Magnitude	Assessment Criteria
Permanent	Effects that have the potential to continue over 15 years are considered as permanent. This typically includes habitat loss such as tree felling.
Temporary	Long term: 10 to 15 years. Medium term: 5 to 10 years. Short term: 0 to 5 years.

Reversibility

- 5.17 A temporary impact is one that means recovery is possible. A permanent impact is one that means recovery is unlikely to occur within a reasonable timescale.

Construction Phase: Revised Layout

- 5.18 This section summarises the significance of potential effects on VERs during the construction phase of the revised development.

Disturbance and Displacement

Bats

- 5.19 Three structures were identified within the wider Margree Site that were considered to have between a low and high potential for supporting roosting bats. None of the coniferous plantations (primarily Sitka Spruce) within the wider Margree Site were considered to be suitable for roosting bats, due to their age structure.

- 5.20 Given the distance of the revised infrastructure construction works from the three structures within the wider Margree Site that have been identified as supporting potential bat roosts, it is considered that none of them would be directly affected by the Proposed Development. Therefore, disturbance during the construction period, on roosting bats, a VER of **high sensitivity**, would be **negligible**, resulting in a **negligible effect** which is **not significant**.
- 5.21 The construction period would result in the loss and disturbance of habitats of low to local value for foraging bats (conifer plantation and water courses). The limited value of such habitats to foraging bats, and the presence of areas of similar to higher quality habitat in the surrounding area, limits the scale of impact such works would have upon the local bat population. Disturbance and displacement of foraging bats, during the construction period, a VER of **high sensitivity**, would be **minor**, resulting in a **minor effect** which is **not significant**.

Otter

- 5.22 The construction works would result in the temporary disturbance of habitats considered to be of moderate value to Otter, including works (upgrading of tracks) directly affecting both the Margree and Regland Burns. Both these burns are considered to support foraging, commuting and potentially resting Otter. This is considered to be an impact of minor magnitude, potentially affecting the distribution of the species at no more than a local level, as Otter only appear to use these burns on an occasional basis. As the works will be undertaken during the day, and Otter are a largely nocturnal species, the risk of directly affecting the species (i.e. through disturbance) is considered to be low. Disturbance and displacement of Otter, a species of **high sensitivity**, during the construction period, would be **minor**, resulting in an effect that is **minor** and thus **not significant**.
- 5.23 The construction works would result in the permanent loss of habitats which are largely considered to be of low (conifer plantation) to local value (wet grassland/mire habitats) to Otter. It is not considered that the loss of such habitats will impact upon, either within site or local, Otter populations. Loss of general habitats during the windfarm construction would have a **negligible impact** on Otter, resulting in a **negligible**, and thus **not significant**, effect.
- 5.24 The revised wind farm layout would also result in permanent changes being made to a very small section of both the Margree and Regland Burns through the upgrading of the access track bridging point across both these burns. These burns are considered to have the potential to be used by foraging, commuting and resting Otter. However, the very small areas to be affected by such works are considered to limit the potential scale of any impact upon Otter, with extensive areas of similar or higher quality habitat for the species being present within the local area. It is considered that the upgrading of the two tracks across the Margree and Regland Burns would have a **minor impact** on Otter, resulting in an effect that is **minor** and thus **not significant**.

Red Squirrel

- 5.25 The revised wind farm layout would result in the loss of approximately 43.1ha of conifer plantation which is considered to be of no more than local value to Red Squirrel. This is considered to be an impact of minor significance, potentially resulting in changes to the distribution of the species within the wider Margree Site, but without affecting its population status at a regional or even local level. It is considered that the loss of this coniferous plantation woodland would have a **minor impact** on Red Squirrel, a species of **high sensitivity**, resulting in an effect that is **minor** and thus **not significant**.
- 5.26 The loss of other habitats from within the Site would not affect Red Squirrels (negligible magnitude) due to the low value of such habitats to the species. The loss of all other habitats, due to the revised wind farm, is therefore considered to be an effect of **negligible** significance upon Red Squirrels.
- 5.27 The revised construction works would also result in the temporary disturbance of the areas of coniferous plantation across the Site, including those areas to be retained. These plantations are considered to be of local value to Red Squirrels. Disturbance of these plantations, through construction works, will have a **minor impact** on the Site's Red Squirrel population (a VER of **high sensitivity**), resulting in a **minor effect** that is **not significant**.
- 5.28 In the event of small numbers of Red Squirrel being present within the works area during the construction phase, the felling operations in particular could result in the harm or death of any individuals present at this time. This is considered to be an impact of at worst, **minor magnitude** (potentially affecting the distribution of the species at no more than a site level due to the small number of individuals likely to be present) upon a feature of **high sensitivity**. This would therefore result in a **minor effect** that is **not significant**.

Reptiles

- 5.29 A population of Common Lizard have been confirmed as being present within the wider Margree Site, and it is also considered, given the habitats present, that a small population of Adder may also be present within the wider Site.
- 5.30 The construction of the turbines and revised associated infrastructure would result in the direct loss of some small areas of potentially suitable habitat, for both Common Lizard and Adder, during construction (habitat loss excluding forestry plantation). However, this loss of habitat is considered to be of low significance when compared with the availability of similar habitats within the wider area. Destruction of this habitat, through construction works, would have a **negligible impact** on reptiles, a receptor of **moderate sensitivity**, resulting in a **negligible**, and thus **not significant**, effect.

Butterfly Assemblage

- 5.31 The construction of the revised wind farm layout would see the loss of some small areas of habitat (rushy pasture/marshy grassland) that appear to be suitable for supporting Small Pearl-bordered Fritillaries. This includes some areas of such habitat where Small Pearly-bordered Fritillaries were recorded during the 2020 surveys, for instance rushy grassland along the edge of the track (which is to be upgraded) near Margree Bothy. However, the loss of this habitat is considered to be minor when compared with the amount of suitable

(for Small Pearl-bordered Fritillary) rushy pasture/marshy grassland habitat present, both within the wider Margree Site and the local area.

- 5.32 Destruction of this habitat, through construction works, would have a **minor impact** on Small Pearl-bordered Fritillaries, a receptor of **moderate sensitivity**, resulting in a **minor effect**, which is **not significant**.

Operational Phase: Revised Layout

Disturbance and Displacement

- 5.33 This section summarises and evaluates the significance of the potential effects on species (without mitigation measures) during the 35-year operational period of the revised layout of the Proposed Development. Both displacement and collision effects on VERs are considered within this section.
- 5.34 The main causes of displacement to non-avian fauna during the operational period of a wind farm are visual and noise disturbance from turbines. Increased presence of people within the Site undertaking maintenance of the Proposed Development also has the potential to cause disturbance to birds.
- 5.35 Levels of human activity on the operational wind farm site are likely to be comparable to the existing situation, with the Site currently being operated as a commercial forestry plantation. There are currently no active farms or inhabited dwellings within the wider Margree Site boundary and the Site is a forestry plantation with access being difficult. Therefore current levels of background human activity within the Site are likely to be **negligible**. Predicted human presence within the Site, during the operational period, is likely to be similar, with the wind farm being operated remotely and maintenance visits being infrequent. Human activity, during the operational phase, would therefore result in a **negligible impact** on VERs of **high-low sensitivity**, all resulting in **negligible effects**, which are **not significant**.

Habitats

- 5.36 Construction of the revised wind farm layout will see the permanent loss of some habitats both on Annex 1 and the Scottish Biodiversity List. However, the areas that will be lost to the construction are very small, with the loss of such habitats considered to be an **intermediate impact**. This **intermediate impact**, on an ecological feature of **moderate sensitivity**, would result in a **moderate/minor effect**, which is **not significant**.

Groundwater Dependent Terrestrial Habitats

- 5.37 Construction of the revised layout would see the loss of several small areas of groundwater dependent NVC habitats. Some of these habitats have high groundwater dependence, whilst some have moderate groundwater dependency. However, as the areas that will be lost to the construction are very small, then the loss of such habitats is considered to be an **intermediate impact**. This **intermediate impact**, on an ecological feature of **moderate sensitivity**, would result in a **moderate/minor effect**, which is **not significant**.

Bats

- 5.38 Bats may be affected by operational wind turbines in three main ways: disturbance of adjacent areas, risk of collision and barotrauma. Low levels of activity by a small range of species have so far been recorded across the Site.
- 5.39 A minimum stand-off distance of 50m between the turbine blade tips and the top of any features/areas that could be used by foraging or commuting bats would be established, in order to minimise the risk of bats being harmed or disturbed, in line with current best-practice guidelines. This would include those plantation edges which will be left in place outwith the felling/key-holing plan. As this distance is likely to be exceeded at the Site, the risk of bats being affected by disturbance of adjacent areas is considered to be low. The operation of the turbines would therefore have an impact of (at worst) **minor magnitude** upon the local bat population (a VER that is of **high sensitivity**), resulting in a **minor impact**, which is **not significant**.
- 5.40 Scottish Natural Heritage (2019) provides information regarding the likely risk to individual bat species, and populations, from wind turbine strike. Two bat species of the genus *Nyctalus* (Leisler's and Noctule Bats), which are considered to be at high risk from collision with wind turbines, at a population level, were identified within the survey area. Bat surveys and assessment undertaken at the Site concluded that the majority of bat species recorded at the Site all generally forage below a height of 10m, so are unlikely to come into contact with the turbine blades when foraging. Due to the likely flight heights of the moderate-low risk bat species present at the Site, the likelihood of collisions is considered to be relatively low, so even if a low number of deaths did occur, no significant impacts on the local bat population are anticipated. It is thus considered that the impact of the revised Proposed Development on the local bat population is also likely to be not significant.
- 5.41 Of the other three species of bat recorded within the survey area, two species (Common Pipistrelle and Soprano Pipistrelle) are considered to have a medium risk of collision, at an individual level, and Daubenton's Bat are considered to have a low risk of collision.
- 5.42 The mortality of bats at wind turbines is a complex phenomenon and is unlikely to be explained by one hypothesis. It is possible that some bats, such as Pipistrelles, may forage at rotor height when insects are migrating during suitable weather conditions. Due to the likely flight heights of the moderate to low-risk bat species present on the Site, the likelihood of collisions is considered to be relatively low.

Otter

- 5.43 Human activity associated with wind farm maintenance, inclusive of vehicle movements, would be limited to the permanent infrastructure areas, such as the tracks and turbine bases. Therefore it is considered that there would be **no significant effects** on the local Otter population as a result of the operation of the windfarm.

Red Squirrel

- 5.44 All the loss of potential Red Squirrel habitat would occur during the construction phase of the Proposed Development. There are thus predicted to be no additional anticipated effects on Red Squirrel during the operational phase of the wind farm. Only limited vehicle

movements would take place during periods of maintenance. These vehicles movements would be restricted to the permanent infrastructure, and would be subject to site speed limits reducing the likelihood of Red Squirrel fatalities. It is therefore predicted that there would be **no significant effects** on the local Red Squirrel population as a result of the operation of the windfarm.

Reptiles

- 5.45 Human activity associated with wind farm maintenance, inclusive of vehicle movements, would be limited to the permanent infrastructure areas, such as the tracks and turbine bases. It is therefore predicted that there would be **no significant effects** on the local Reptile populations as a result of the operation of the Proposed Development.

Butterfly Assemblage

- 5.46 All the loss of potential Small Pearl-bordered Fritillary habitat would occur during the construction phase of the revised wind farm. Therefore, there are predicted to be no more additional effects on Small Pearl-bordered Fritillary during the operational phase of the wind farm. It is therefore predicted that there would be **no significant effects** on the local butterfly populations as a result of the operation of the revised wind farm.

Fisheries

- 5.47 Habitats on site are considered to be of generally low to moderate value to local fish populations, with some of the larger watercourses providing potential habitats for salmonid and other fish species.
- 5.48 The construction of the turbines and associated infrastructure, particularly new watercourse crossing points, could result in the following impacts:
- Severance of watercourses for both migratory and resident fish species, moving into and out of breeding and foraging areas;
 - Harm to fish during works; and
 - Pollution to downstream habitats as a result of the works, including increased siltation of habitats.
- 5.49 However, all works on site will strictly adhere to a Construction Environmental Management Plan (CEMP) in order to minimise the risk of causing harm or damage to fisheries and their environment. It is therefore considered that the impacts on fisheries, through construction works, would have a **minor impact** on fisheries, a receptor of **moderate sensitivity**, resulting in a **minor**, and thus **not significant**, effect.

Decommissioning Phase

- 5.50 It is extremely difficult to evaluate the potential effects decommissioning could have on important habitats and non-avian fauna populations after the lifespan of the revised wind farm. In addition, it is possible that after 35 years habitats and species communities may have altered significantly.

- 5.51 In the absence of mitigation the effects of decommissioning are likely to be similar to those of the construction phase, with these potential effects likely to be temporary. Ecology surveys would be required prior to decommissioning works commencing to identify protected species within the planned work areas. These would be carried out to best practice methodology, guidance and legislation at that time.

Summary of Effects

- 5.52 The significance of impact on any of the ecological receptors is, at most, **moderate/minor adverse effect**.

6 ORNITHOLOGY

Construction Phase: Revised Layout

- 6.1 This section summarises the significance of potential effects on Valued Ornithological Receptors (VORs) during the construction phase of the development.

Habitat Modification

- 6.2 The revised wind farm site is currently a mixed commercial conifer plantation with limited ornithological biodiversity. As part of the construction phase, approximately 43.1ha of conifer plantation will be felled as a result of key-holing turbines and clearance for other infrastructure. This felling will result in a direct permanent loss of breeding/foraging habitat, as although such felling already occurs on the plantations, these areas are then replanted with trees on a rotational basis.
- 6.3 Tree felling has the potential to disturb breeding birds and damage or destroy bird nests, eggs or young. It is an offence under the WCA to kill or injure any bird, disturb Schedule 1 breeding bird species or to damage or destroy bird nests, eggs or young. As Common Crossbill (a Schedule 1 species) was recorded breeding within the wider Margree Site, mitigation measures will be implemented to ensure compliance with the legislation.

Disturbance and Displacement

Whooper Swan

- 6.4 Whooper Swans were only recorded flying over the wind farm during the non-breeding season. Therefore disturbance during the construction phase would have **no effect** on this species with regard to either breeding or wintering/passage birds.

Pink-footed Goose

- 6.5 Pink-footed Geese were only recorded flying over the wider Margree Site during the non-breeding season. Therefore disturbance during the construction phase would have **no effect** on this species with regard to either breeding or wintering/passage birds.

Teal

- 6.6 Teal were only recorded from the Core Study Area during the breeding season. There were no Teal flights recorded over the wind farm or the wider Margree Site. However, one pair of Teal bred on Regland Loch (in both 2019 and 2020), which is within the wider Margree Site and approximately 900m from the revised wind farm development. Given the distance of the proposed construction works from the loch, it is considered that disturbance during the construction period on breeding Teal, a receptor of **moderate sensitivity**, would be **minor**, resulting in a **minor effect** which is **not significant**. Displacement and disturbance during the construction period would be short-term and reversible.
- 6.7 Further pairs of Teal (two pairs in 2019 and one pair in 2020) were recorded breeding on Lochinvar. Lochinvar is approximately 1.75km from the nearest proposed construction and

therefore disturbance during the construction phase would have **no effect** on Teal nesting on Lochinvar.

Goosander

- 6.8 There were no Goosander flights recorded over the revised wind farm or the wider Margree Site. Likewise, no Goosanders were found to be breeding, or wintering, within the revised wind farm site or the wider Margree Site. Up to three pairs of Goosander were recorded breeding within the 1km buffer around the Margree Site. The nearest of these pairs, to the revised wind farm layout, were on Lochinvar, which is approximately 1.75km from the nearest proposed construction. It is therefore considered that disturbance during the construction phase would have **no effect** on Goosander, with regard to either breeding or wintering birds.

Golden Eagle

- 6.9 The only records of Golden Eagle during all the surveys, was of a single immature in flight, over the 1km buffer around the wider Margree Site, in April. This bird was considered to be a wandering immature bird. There were no other records of Golden Eagle from the wind farm site, or the core study area, during either the 2019 or 2020 breeding season. There will therefore be **no effect** on nesting Golden Eagle from disturbance during the construction period.
- 6.10 Non-breeding Golden Eagle are unlikely to regularly hunt within, or adjacent to, the proposed windfarm site, as demonstrated by the VP surveys undertaken so far. Wind farm construction would therefore have a **negligible impact** on a feature of **high sensitivity**, resulting in a **negligible effect** which is **not significant**. Any displacement and disturbance that did occur during the construction period would be short-term and reversible.

Goshawk

- 6.11 No Goshawk bred within either the revised wind farm site or the wider Margree Site, in either 2019 or 2020. However, a combination of surveys and consultation confirmed that a pair of Goshawk bred, in both 2019 and 2020, within the 1km buffer around the Margree Site, and another pair bred within the 2km buffer in 2019. The pair within the 1km buffer is approximately 500m from the revised development (500m from a track but 2.75km from the actual wind farm), whilst the pair within the 2km buffer is approximately 2.75km from the revised layout. As a result of the distance between these breeding locations and the proposed development site, disturbance during the construction period on nesting Goshawks is considered to be **negligible** and thus **not significant**.
- 6.12 A Goshawk was observed in flight, on one occasion, over the wider Margree Site. It is considered that disturbance during the construction period would have a **negligible impact** on a feature of **moderate sensitivity** and thus a **negligible effect** which is **not significant**. Any displacement and disturbance that did occur during the construction period would be short-term and reversible.

Red Kite

- 6.13 A combination of surveys and consultation confirmed that no Red Kites were nesting within the revised wind farm site, the wider Margree Site or a 1km buffer around Margree, in either 2019 or 2020. However, one pair of Red Kite were considered to be nesting within the core study area. This pair was in the 2km buffer around the Margree Site and were over 1.3km from the revised wind farm construction site. Given the distance between this nest site and the revised development site, disturbance during the construction period, on nesting Red Kites, is considered to be **negligible** and thus **not significant**.
- 6.14 Red Kites were observed in flight, over either the revised turbine swept area or the wider Margree Site, on 39 occasions between April 2019 and July 2020. Although Red Kites are not nesting within either the revised wind farm site or the wider Margree Site, they are using the area for foraging. It is therefore considered that disturbance during the construction period would have an **intermediate impact** on foraging Red Kites, a feature that is of **moderate sensitivity**, through displacement. This would in turn result in a **minor/moderate effect** which is **not significant**. Any displacement and disturbance that did occur during the construction period would be short-term and reversible.

Peregrine

- 6.15 A combination of surveys and consultation confirmed that a pair of Peregrine bred, in both 2019 and 2020, just outside the core study area: over 2.5km from the revised wind farm layout. As a result of the distance between the breeding location and the development site, disturbance during the construction period on nesting Peregrines would be **negligible** and thus **not significant**.
- 6.16 Peregrines were observed in flight, over either the turbine swept area or the wider Margree Site, on three occasions in March, April and August. It is considered that disturbance during the construction period would have a **negligible impact** on a feature of **moderate sensitivity** and thus a **negligible effect** which is **not significant**. Any displacement and disturbance that did occur during the construction period would be short-term and reversible.

Merlin

- 6.17 The only records of Merlin during all the surveys, were of singles in flight over the wider Margree Site in February and October, and thus during the non-breeding season. No Merlin were recorded from the revised wind farm site, or the core study area, during the breeding season. There will therefore be **no effect** on nesting Merlin from disturbance during the construction period.
- 6.18 Wintering and migrant Merlin are unlikely to regularly hunt within, or adjacent to, the revised wind farm site, as demonstrated by the VP surveys. Wind farm construction would therefore have a **negligible impact** on a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**. Any displacement and disturbance that did occur during the construction period would be short-term and reversible.

Lapwing

- 6.19 Lapwing were only recorded from the core study area during the non-breeding season and therefore disturbance during the construction period would have no effect on nesting

Lapwing. The only record of Lapwing, from the core study area, during all the surveys was of a flock of five over the wider Margree Site in January. Disturbance during the construction period would have a **negligible impact** on a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**. Displacement and disturbance during the construction period would be short-term and reversible.

Oystercatcher

- 6.20 No Oystercatchers were found to be breeding within the revised wind farm site or the wider Margree Site. However, two pairs of Oystercatcher were recorded breeding within the 1km buffer around the Margree Site. Both of these pairs were on Lochinvar, which is approximately 1.75km from the nearest proposed construction. Just one Oystercatcher flight was recorded over the wider Margree Site during the VP. It is therefore considered that disturbance during the construction phase would have a **negligible impact** on a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**. Displacement and disturbance during the construction period would be short-term and reversible.

Snipe

- 6.21 No Snipe were found to be breeding within the revised wind farm site or the wider Margree Site. However, a single pair of Snipe was recorded breeding within the 1km buffer around the Margree Site, with two additional pairs in the 2km buffer. The nearest of these pairs was over 1km from the nearest proposed construction. Just five Snipe flights were recorded over the wider Margree Site during the VP. It is therefore considered that disturbance during the construction phase would have a **negligible impact** on a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**. Displacement and disturbance during the construction period would be short-term and reversible.

Curlew

- 6.22 No Curlew nested within the revised wind farm site, the wider Margree Site or the 1km buffer during either 2019 or 2020. However, up to four pairs were recorded breeding within the 2km buffer around the Margree Site. The nearest of these pairs was over 2km from the nearest revised layout construction. Just one Curlew flight was recorded over the wider Margree Site during the VP surveys. It is therefore considered that disturbance during the construction phase would have a **negligible impact** on a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**. Displacement and disturbance during the construction period would be short-term and reversible.

Common Sandpiper

- 6.23 There were no Common Sandpiper flights recorded over the revised wind farm layout or the wider Margree Site. Likewise, no Common Sandpipers were found to be breeding within the revised wind farm site or the wider Margree Site. Up to two pairs of Common Sandpiper were recorded breeding within the 1km buffer around the Margree Site, with another pair in the 2km buffer. The nearest of these pairs, to the revised layout, were on Lochinvar, which is approximately 1.75km from the nearest proposed construction. It is

therefore considered that disturbance during the construction phase would have **no effect** on Common Sandpiper.

Black Grouse

- 6.24 No Black Grouse were recorded within the core study area during the ornithology surveys. It is therefore considered that disturbance during the construction phase would have **no effect** on Black Grouse.

Barn Owl

- 6.25 A combination of surveys and consultation confirmed that a pair of Barn Owl bred, in both 2019 and 2020, within the 1km buffer around the wider Margree Site. Although this traditional nesting site is within the 1km buffer, it is over 2km from the nearest revised layout construction. As a result of the distance between the breeding location and the development site, disturbance during the construction period on nesting Barn Owls would be **negligible** and thus **not significant**.
- 6.26 No Barn Owl flights were recorded within either the revised turbine swept area or the wider Margree Site. It is considered that disturbance during the construction period would have a **negligible impact** on a feature of **moderate sensitivity** and thus a **negligible effect** which is **not significant**. Any displacement and disturbance that did occur during the construction period would be short-term and reversible.

Long-eared Owl

- 6.27 Long-eared Owls were only recorded from the Core Study Area during the 2020 breeding season. There were no Long-eared Owl flights recorded over the revised wind farm or the wider Margree Site. However, two pairs of Long-eared Owl bred in the wider Margree Site. These two pairs were 875m and 1.25km from the nearest revised wind farm construction. Given the distance of the construction works from these two territories, it is considered that disturbance during the construction period on breeding Long-eared Owl, a receptor of **low sensitivity**, would be **minor**, resulting in a **minor/negligible effect** which is **not significant**. Displacement and disturbance during the construction period would be short-term and reversible.
- 6.28 Another two pairs of Long-eared Owl were recorded breeding in the 1km buffer around the Margree Site, with a further two pairs in the 2km buffer. The closest of these pairs was approximately 1.75km from the nearest proposed construction and therefore disturbance during the construction phase would have **no effect** on Long-eared Owls breeding within the 1km or 2km buffers.

Nightjar

- 6.29 No Nightjars were recorded within the core study area during the ornithology surveys. It is therefore considered that disturbance during the construction phase would have **no effect** on Nightjar.

Common Crossbill

- 6.30 Common Crossbills were only confirmed as nesting from the Core Study Area during the 2020 breeding season. At least five pairs of Common Crossbill bred in the wider Margree Site. These five pairs were all over 475m from the nearest revised wind farm layout construction. Given the distance of the construction works from these territories, it is considered that disturbance during the construction period on breeding Common Crossbills, a receptor of **moderate sensitivity**, would be **minor**, resulting in a **minor effect** which is **not significant**. Displacement and disturbance during the construction period would be short-term and reversible.
- 6.31 At least another two pairs of Common Crossbill were recorded breeding in the 1km buffer around the Margree Site. The closest of these pairs was over 1.5km from the nearest construction and therefore disturbance during the construction phase would have **no effect** on Common Crossbills breeding within the 1km buffer.

Operational Phase: Revised Layout

Disturbance, Displacement and Collision

- 6.32 This section summarises and evaluates the significance of the potential effects on birds (without mitigation measures) during the 35 year operational period of the Development. Both displacement and collision effects on VORs are considered within this section.
- 6.33 The main causes of displacement to birds during the operational period of a windfarm are visual and noise disturbance from turbines. Increased presence of people within the site boundary undertaking maintenance of a proposed development also has the potential to cause disturbance to birds.
- 6.34 Levels of human activity on the operational wind farm site are likely to be comparable to the existing situation, with the proposed development site being operated as a commercial forestry plantation. There are currently no active farms or active dwellings within the wider Margree Site boundary and the site is a forestry plantation with access being difficult. Therefore current levels of background human activity within the revised wind farm site boundary are likely to be **negligible**. Predicted human presence within the development site, during the operational period, is likely to be similar, with the windfarm being operated remotely and maintenance visits being infrequent. Human activity, during the operational phase, would therefore result in a negligible impact on VORs of **high-low sensitivity**, all resulting in **negligible effects**, which are **not significant**.

Whooper Swan

- 6.35 The only Whooper Swans recorded during the VP surveys were two swans flying together, over the revised turbine swept area, but above collision risk height. Based on this, it is considered that the risk of collision with the proposed turbines is very low.
- 6.36 The operational period of the revised wind farm would therefore have a **negligible impact** on Whooper Swan, a feature of **high sensitivity**, resulting in a **negligible effect** which is **not significant**.

Pink-footed Goose

6.37 The only Pink-footed Geese recorded during the VP surveys were a skein of 70+ flying over the wider Margree Site, but both away from the revised turbine swept area and above collision risk height. Based on this, it is considered that the risk of collision with the proposed turbines is very low.

6.38 The operational period of the revised wind farm would therefore have a **negligible impact** on Whooper Swan, a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Teal

6.39 A pair of Teal nested on Regland Loch, which is within the wider Margree Site and approximately 900m from the revised wind farm. Given this distance, it is considered that disturbance from the operational wind farm on breeding Teal would be minimal. The impact, on a receptor of **moderate sensitivity**, would be **minor**, resulting in a **minor effect** which is **not significant**.

6.40 Further pairs of Teal were recorded breeding on Lochinvar, which is over 2.5km from the revised operational wind farm. Therefore disturbance during the operational phase of the wind farm would have no effect on Teal nesting on Lochinvar.

6.41 No Teal were recorded flying over either the revised wind farm or the wider Margree Site during the VP surveys. It is therefore considered that the risk of collision with the turbines is very low.

6.42 The operational period of the revised wind farm would therefore have a **minor impact** on Teal, a receptor of **moderate sensitivity**, resulting in a **minor effect** which is **not significant**.

Goosander

6.43 The nearest breeding Goosanders to the revised wind farm are on Lochinvar, which is approximately 2.5km from the revised wind farm site. Given this distance, it is considered that disturbance from the operational wind farm on breeding Goosander would be minimal. The impact, on a receptor of low sensitivity, would be **negligible**, resulting in a **negligible effect** which is **not significant**.

6.44 No Goosander were recorded flying over either the revised wind farm or the wider Margree Site during the VP surveys. It is therefore considered that the risk of collision with the turbines is very low.

6.45 The operational period of the wind farm would therefore have a **negligible impact** on Goosander, a receptor of **low sensitivity**, resulting in a **negligible effect** which is **not significant**.

Golden Eagle

6.46 A combination of the ornithology surveys, desktop and consultation data confirmed that Golden Eagle were not nesting/holding territory within the revised windfarm site, the wider Margree Site or the core study area. Therefore, the wind farm will cause **no effect** on breeding Golden Eagle from disturbance during the operational period.

6.47 The only Golden Eagle recorded during the VP surveys was a single immature bird recorded over the 1km buffer, and therefore outside both the revised wind farm site and the wider Margree Site. Based on this, it is considered that the risk of collision with the proposed turbines is very low.

6.48 The operational period of the Development would therefore have a **negligible impact** on Golden Eagle, a feature of **high sensitivity**, resulting in a **negligible effect** which is **not significant**.

Goshawk

6.49 A combination of ornithology surveys and consultation confirmed that Goshawk were not nesting/holding territory within the revised wind farm or the wider Margree Site. However, two pairs bred both approximately 2.75km from the revised wind farm, one pair in 2019 and 2020 and the other just in 2019. As a result of the distance between these breeding locations and the revised wind farm layout, operational disturbance on nesting Goshawks from the revised wind farm is considered to be **negligible** and thus **not significant**.

6.50 Of the Goshawk flights recorded during the VP surveys no flights were recorded over the revised wind farm site. Based on this, it is considered that the risk of collision, between Goshawk and the turbines is very low.

6.51 The operational period of the revised wind farm would have a **negligible impact** on Goshawk, a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Red Kite

6.52 A combination of ornithology surveys and consultation confirmed that Red Kite were not nesting/holding territory within the revised wind farm site, the wider Margree Site or a 1km buffer around the Margree Site. However, a pair of Red Kite were considered to be holding territory within the 2km buffer in 2019, but not subsequently in 2020. This territory was located approximately 3.5km from the revised wind farm layout. As a result of the distance between this territory and the revised wind farm, operational disturbance on nesting Red Kites from the wind farm is considered to be **negligible** and thus **not significant**.

6.53 During the VP surveys, a total of ten Red Kite flights were recorded over/within the revised turbine swept area, with eight of these at a height where there was a risk of collision with the proposed turbines. Given that this amounts to a total of eight Red Kite flights, within the turbine swept area at collision risk height, during the 24 months of April 2019 to March 2021, then it is considered that the risk of collision between Red Kite and the turbines is low.

6.54 The operational period of the wind farm would have a **minor impact** on Red Kite, a feature of **high sensitivity**, resulting in a **minor effect** which is **not significant**.

Peregrine

6.55 A combination of the ornithology surveys, desktop and consultation data confirmed that Peregrine were not nesting/holding territory within the revised wind farm site, the wider Margree Site or the core study area. A pair of Peregrine did nest over 2km from the wider

Margree Site, but this pair are outside the 2km core study area. It is therefore considered that the revised wind farm will cause **no effect** on breeding Peregrine from disturbance during the operational period.

- 6.56 Of the Peregrines recorded during the VP surveys, three flights were over the revised wind farm site or the wider Margree Site. Of these, only two flights were over the turbine swept area and both of them were above collision risk height. Based on this, it is considered that the risk of collision, between Peregrines and the turbines is very low.
- 6.57 The operational period of the revised wind farm would therefore have a **negligible impact** on Peregrine, a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Merlin

- 6.58 A combination of the ornithology surveys, desktop and consultation data confirmed that Merlin were not nesting/holding territory within the revised wind farm site, the wider Margree Site or the core study area. Therefore, the wind farm will cause **no effect** on breeding Merlin from disturbance during the operational period.
- 6.59 Of the Merlin flights recorded during the VP surveys no flights were recorded over the revised wind farm site. Based on this, it is considered that the risk of collision, between Merlin and the turbines is very low.
- 6.60 The operational period of the revised wind farm would have a **negligible impact** on Merlin, a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Lapwing

- 6.61 Lapwing did not nest within the revised wind farm, the wider Margree Site or neither of the 1km or 2km buffers around the Site, in either 2019 or 2020. Therefore, the revised wind farm will cause **no effect** on breeding Lapwings from disturbance during the operational period.
- 6.62 No Lapwing flights were recorded over the turbine swept area during the VP surveys. It is therefore considered that the risk of collision, between Lapwing and the turbines, is very low.
- 6.63 The operational period of the wind farm would have a **negligible impact** on Lapwing, a species of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Oystercatcher

- 6.64 Oystercatcher did not nest within the revised wind farm, or the wider Margree Site, during either 2019 or 2020. Two pairs did nest, within both years, at Lochinvar, which, although within the 1km Margree buffer, is over 2.5km from the revised wind farm. Given this distance, it is considered that the revised wind farm would cause **no effect** on breeding Oystercatchers during the operational period.

6.65 No Oystercatcher flights were recorded over the turbine swept area during the VP surveys. It is therefore considered that the risk of collision, between Oystercatchers and the proposed turbines, is very low.

6.66 The operational period of the windfarm would have a **negligible impact** on Oystercatcher, a species of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Snipe

6.67 Snipe did not nest within the revised wind farm, or the wider Margree Site, during 2019 or 2020. However, one pair of Snipe did breed within the 1km Margree Site buffer in 2020, with two pairs in the 2km buffer in 2019 and 2020. Although one of the 2020 pairs was within the 1km buffer around the Margree Site, this pair was actually 2.75km from the revised wind farm. Given this distance, it is considered that the revised wind farm would cause **no effect** on breeding Snipe during the operational period.

6.68 No Snipe flights were recorded over the turbine swept area during the VP surveys. It is therefore considered that the risk of collision, between Snipe and the turbines, is very low.

6.69 The operational period of the revised wind farm would have a **negligible impact** on Snipe, a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Curlew

6.70 No Curlew bred within the revised wind farm, the wider Margree Site or the 1km buffer around the Margree Site during either 2019 or 2020. However, two to three pairs bred within the 2km Margree buffer. The nearest of these pairs was approximately 2km from the revised wind farm. Given this distance, it is considered that the revised wind farm would cause **no effect** on breeding Curlew during the operational period.

6.71 No Curlew flights were recorded over the turbine swept area during the VP. It is therefore considered that the risk of collision, between Curlew and the proposed turbines, is very low.

6.72 The operational period of the wind farm would have a **negligible impact** on Curlew, a feature of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Common Sandpiper

6.73 Common Sandpiper did not nest within the revised wind farm, or the wider Margree Site, during either 2019 or 2020. However, two pairs did nest at Lochinvar in 2019 (just one pair in 2020), which, although within the 1km Margree buffer, is over 2.5km from the revised wind farm. Given this distance, it is considered that the revised wind farm would cause **no effect** on breeding Common Sandpipers during the operational period.

6.74 No Common Sandpiper flights were recorded over the turbine swept area during the VP surveys. It is therefore considered that the risk of collision, between Common Sandpiper and the turbines, is very low.

- 6.75 The operational period of the revised wind farm would have a **negligible impact** on Common Sandpiper, a species of moderate sensitivity, resulting in a **negligible effect** which is **not significant**.

Black Grouse

- 6.76 No Black Grouse were recorded within the core study area during the ornithology surveys. It is therefore considered that both disturbance during the operational phase of the wind farm and potential collision with the turbines will have **no effect** on Black Grouse.

Barn Owl

- 6.77 No Barn Owls nested within the revised wind farm or the wider Margree Site during 2019 or 2020. However, a pair did nest within the 1km buffer around the Margree Site during both years. Although this nesting site is within the 1km Margree buffer, it is approximately 3km from the wind turbines. Given this distance, it is considered that the revised wind farm would cause **no effect** on breeding Barn Owls during the operational period.

- 6.78 No Barn Owl flights were recorded within/over the turbine swept area during the VP surveys. It is therefore considered that the risk of collision, between Barn Owl and the turbines, is very low.

- 6.79 The operational period of the revised wind farm would have a negligible impact on Barn Owl, a species of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Long-eared Owl

- 6.80 No Long-eared Owls were recorded breeding within the revised wind farm site during either 2019 or 2020. However, two pairs bred within the wider Margree Site in 2020. These two pairs were 875m and 1.25km from the nearest revised wind turbines. Given this distance, it is considered that the wind farm would cause **no effect** on breeding Long-eared Owls during the operational period.

- 6.81 No Long-eared Owl flights were recorded within/over the revised turbine swept area during the VP surveys. It is therefore considered that the risk of collision, between Long-eared Owl and the turbines, is very low.

- 6.82 The operational period of the wind farm would have a **negligible impact** on Long-eared Owl, a species of **low sensitivity**, resulting in a negligible effect which is **not significant**.

Nightjar

- 6.83 No Nightjars were recorded within the core study area during the ornithology surveys. It is therefore considered that both disturbance during the operational phase of the wind farm and potential collision with the turbines will have **no effect** on Nightjar.

Common Crossbill

- 6.84 No Common Crossbills were recorded breeding within the revised wind farm site during 2019 or 2020. However, five pairs did breed within the wider Margree Site in 2020. These five pairs were all over 500m from the revised wind farm. Given the distance of the turbines from these territories, it is considered that the wind farm would cause **no effect** on breeding Common Crossbill during the operational period.
- 6.85 No Common Crossbill flights were recorded within/over the turbine swept area during the VP surveys. It is therefore considered that the risk of collision, between Common Crossbill and the proposed turbines, is very low.
- 6.86 The operational period of the wind farm would have a **negligible impact** on Common Crossbill, a receptor of **moderate sensitivity**, resulting in a **negligible effect** which is **not significant**.

Summary of Effects

- 6.87 The significance of impact on any of the ornithological receptors is, at most, **moderate/minor adverse effect**.

7 LANDSCAPE AND VISUAL

Introduction

- 7.1 This section presents an updated consideration of the landscape and visual effects in relation to post-consent changes to Margree wind farm; hereafter referred to as the Proposed Development.
- 7.2 This Comparative Landscape and Visual Impact Assessment (CLVIA) has been prepared by chartered Landscape Architects at Pegasus Group who prepared the assessment of landscape and visual effects set out in the Environmental Impact Assessment (EIA) material concerning the Original EIAR (2022 Allowed Appeal scheme comprising nine turbines up to 200m to blade tip).
- 7.3 The Proposed Development consists of a 20m increased tip height to all nine consented turbines, which were previously 200m in height to blade tip. The Proposed Development includes infrastructure layout modifications to the Site layout.

Approach and Scope of Assessment

- 7.4 The methodology and approach taken to this CLVIA generally follows that of the earlier Landscape and Visual Impact Assessment (LVIA) work first set out in the Environmental Impact Assessment Report (EIAR) which was submitted as part of the original EIAR.
- 7.5 It is noted that since the original EIAR, National Planning Framework 4 (NPF4) has been published (February 2023) which provides an updated policy context in which the LVIA work is to be considered. In particular, it is noted that Policy 11 confirms that significant landscape and visual impacts “are to be expected” for wind energy development and that “Where impacts are localised and/or appropriate design mitigation has been applied, they will generally be considered to be acceptable”. In addition, it is noted that NatureScot have published their ‘Landscape Sensitivity Assessment Guidance (Methodology)’ (2022) and their ‘Guidance on Aviation Lighting Impact Assessment’ (November 2024).
- 7.6 The relevant Local Development Plan remains the Dumfries and Galloway Local Development Plan 2 (LDP2) which was adopted in 2019 and was considered as part of the earlier LVIA material. Similarly, the ‘Dumfries & Galloway Wind Farm Landscape Capacity Study’ Supplementary Guidance, remains the version from February 2020 which was considered when the original EIAR was approved.
- 7.7 It should be noted that there would be no change to the construction or decommissioning phases of the Proposed Development when compared with those of the original EIAR and so effects during these phases are judged to be consistent with the original EIAR. As a result, they are not discussed further.
- 7.8 The assessment instead focusses on the potential for any changes to the previously assessed effects during the operational phase of the Proposed Development.

7.9 The scope of the LVIA is therefore as follows:

- Assessment of Landscape Effects – consideration of any change as a result of the Proposed Development compared to the original EIAR.
- Assessment of Visual Effects – consideration of any change as a result of the Proposed Development compared to the original EIAR.
- Night-time assessment – consideration of any change as a result of the Proposed Development compared to the original EIAR.
- Cumulative Assessment – consideration of any change as a result of the updated cumulative situation; and
- Summary - summaries the key changes to the landscape and visual assessment as a result of the Proposed Development.

7.10 This CLVIA is supported by the following Figures and Visualisations:

- Updated ZTVs of the Proposed Development.
- Comparative ZTV of the original EIAR and the Proposed Development.
- Updated Visualisations for five viewpoints; and
- Comparative Wirelines for all 15 viewpoints.

Updates to Baseline

7.11 A review has taken place to establish whether there are any notable changes to the baseline situation which was reported in the original LVIA material from 2020 and then reviewed as part of the original EIAR.

7.12 Regarding landscape character, it is noted that the Dumfries and Galloway Wind Farm Landscape Capacity Study (DGWLCS) was updated in February 2025. The key difference from the original EIAR which was considered under the previous 2020 DGWLCS, is that the updated DGWLCS now considers there to be a reduced sensitivity to Very Large Turbines in two assessment units/Landscape areas, these are:

- Foothills with Forest (20) – Eskdale/Castle Oer/Tinnisburn and Stroan Landscape Areas; and
- Southern Uplands with Forest (22) – Eskdalemuir Landscape Area.

7.13 The Proposed Development is situated within the Foothills with Forest (2020) Stroan Landscape Area. Therefore, a significant update to the baseline from the original EIAR is that there is a reduced sensitivity for Very Large Turbines at the site of the Proposed Development.

7.14 Regarding visual receptors, it is not considered that there is any substantive change within the study area of relevance to the assessment of visual effects from the Proposed Development.

- 7.15 It was noted in the EIAR that parts of the Site incorporate commercial plantation forestry, which is subject to temporal change due to felling regimes and that future policy changes to plantation techniques and practice may bear influence on the landscape in the future. This remains applicable. Likewise, it was also noted that the landscape in which the Site is located has, in recent years, seen a rise in a number of trees being infected with *Phytophthora ramorum*. The Forestry Commission have previously named the Dumfries and Galloway region the 'Galloway Red Zone' and a management regime has been in place to prevent the movement of infected timber out of the area. The pathogen is referred to as Larch Tree Disease in the UK, and within the Galloway Forest there have already been large areas of Larch infected by the disease. This issue continues to apply.
- 7.16 The EIAR also noted that within the wider landscape, there were a number of other commercial scale wind energy developments proposed or being considered at scoping which, if consented, would alter the existing nature of the landscape. Some of these projects have progressed through the planning system being either consented or refused and an updated cumulative position now applies. As previously noted in the earlier submissions, there is however still an existing influence of wind energy development upon the landscape character of the study area which is relevant to this CLVIA.
- 7.17 When considering the updates to the baseline conditions, any changes are not thought to be substantive. As a result, the viewpoint photography used in the production of the updated visualisations has not been updated.

Zone of Theoretical Visibility

- 7.18 Updated ZTVs have been produced for the Proposed Development, including a Comparative ZTV to illustrate the theoretical visibility patterns of the original EIAR and the Proposed Development.
- 7.19 The Comparative ZTV (Figure 6.43) indicates the additional areas where there may be the possibility of viewing the Proposed Development compared to the original EIAR. On review, there would only be a marginal increase in theoretical visibility levels, with visibility of the Proposed Development largely occurring on the edges of areas displaying visibility of both the Proposed Development and the original EIAR. Across the 35km LVIA study area, there are no notable new areas displaying visibility of the Proposed Development in isolation.
- 7.20 As a result of this analysis, any landscape or visual effect judged in the LVIA material prepared for the original EIAR considered to be moderate to minor or below has not been re-assessed owing to the unlikelihood of identifying a significant effect.

Assessment of Landscape Effects

- 7.21 It was previously identified for the original EIAR that there would be no more than a minor adverse level of effect on existing landscape features during construction, primarily relating to the loss of a relatively small amount of existing landcover, the culverting of watercourses and temporary areas of excavation. These effects were judged as being not significant.

- 7.22 When considering the infrastructure layout and built footprint amendments proposed as part of the Proposed Development in-part to accommodate the potential presence of taller turbines on Site, the change to landscape features is not considered to be substantive. As a result, there is judged to be no change to the assessment of effects on landscape features as set out in the LVIA material for the original EIAR.
- 7.23 With regards to landscape character effects, it was previously identified in the original EIAR that all nine turbines were located towards the northern section of the extensive 176: Foothills with Forest - Dumfries & Galloway LCT. Within 1km, the LCT was judged to be directly affected as a result of the turbines, and due to the open moorland nature of the landscape (primarily to the north-east and east), these effects were predicted to result in a major level of effect upon the LCT, which was deemed to be significant.
- 7.24 In turn, within 3km, the effects upon the 176: Foothills with Forest - Dumfries & Galloway LCT, were noted to be limited by the extensive areas of plantation woodland and higher land to the east and south-east of the Site associated with Wether Hill, Ewe Hill and Stroan Hill. Due to the prominence of the turbines within 3km of the Site (albeit in limited areas), a moderate to major level of effect upon the LCT was predicted, which was deemed to be significant. Beyond 3km, effects upon the LCT were predicted to be not significant.
- 7.25 In the neighbouring 175: Foothills - Dumfries & Galloway LCT, the magnitude of change was assessed as low owing to the presence of local hills, namely Wether Hill and Ewe Hill, limiting theoretical visibility. As a result, effects were judged as minor upon the LCT, which were deemed to be not significant.
- 7.26 Between 3km and 5km in the 175: Foothills - Dumfries & Galloway LCT, much of the land rises up towards the high peaks of Brown Hill, Glencrosh Hill and Big Morton Hill, as well as to the south-east where open moorland and local hills are located, including Lochurr Hill and Girharrow Hill. Due to the elevated location in comparison to the Site, the influence of the Margree turbines upon the LCT was assessed at worst as medium to high, resulting in a moderate to major level of effect upon the LCT, which was deemed to be significant. These effects were however considered to be limited to the highest peaks, with less influence upon land to the south-east. Beyond 5km, effects upon the LCT were predicted to be not significant.
- 7.27 For the 178: Southern Uplands with Forest – Dumfries and Galloway LCT, it was identified that within 5km to the north and north-west, the consented turbines would influence only areas of higher ground, including Bennan and Fingland Hill to the north-west and Carroch Hill and Grenngair to the north. Other areas potentially influenced by the consented turbines were judged to be curtailed by woodland cover. The magnitude of change was assessed as no greater than medium to high, resulting in a moderate to major level of effect upon the LCT, which was deemed to be significant. These levels of effects were however predicted to be limited to the highest peaks closest to the Site. Beyond 5km, effects upon the LCT were predicted to be not significant.
- 7.28 All other effects upon LCTs within the study area, were identified not to be significant.
- 7.29 As with the original EIAR, all nine of the turbines considered as part of the Proposed Development would be located in LCT 176. Having appraised the potential for the

Proposed Development to give rise to a greater level of effect on landscape character than the original EIA, it is considered that the change in height of the turbines from 200m to 220m would generally be barely perceptible when considered in the context of the scale and nature of the consented turbines, particularly from more distant locations and landscapes. It is recognised that the change in Site layout and in the height of the turbines may cast more of an influence in the surrounding landscapes, such as revealing additional blade tip rotations and/or turbine hubs above areas of landform or tree cover, where visibility of the consented turbines was previously more limited.

- 7.30 On this basis, and with regards to the identified character and characteristics of the wider landscape, it is considered that indirect and significant effects arising from the Proposed Development would extend marginally further (up to no more than an approximate distance of 500m) across parts of the 'host' landscape character types within which the Proposed Development is located: LCT 176: Foothills with Forest - Dumfries & Galloway; and across similar distances in the neighbouring landscapes of LCT 175: Foothills - Dumfries & Galloway and LCT 178: Southern Uplands with Forest – Dumfries and Galloway.
- 7.31 As it is judged that the proposed changes would only be discernible from the closer landscape receptors, there is not considered to be any further changes to the level of significant effects previously identified.

Assessment of Visual Effects

- 7.32 With regards to visual amenity, significant effects were previously identified for three of the 15 representative viewpoints included with the LVIA material for the original EIA: Viewpoint 2. Minor road near Auchenshinnoch; Viewpoint 3 - Minor Road on Bogue Moor; and Viewpoint 4 - Southern Upland Way at Culmark Hill.
- 7.33 The original LVIA identified that in relation to properties within 5km of the Site, that there would be significant visual effects upon select properties to the north and west of the Site, including Fingland, Auchenshinnoch and Lochinvar Lodge, due to the open nature and proximity to the Site. There were however no further significant effects predicted upon other properties or upon the surrounding settlements, including from Minnygryle, which lies approximately 1.9km east of the Site along Beech Drive. Minnygryle was the only property identified as being located within a 2km radius of a Margree turbine.
- 7.34 Significant effects were also identified upon the two minor roads located close to the Site to the north and west. All other effects upon surrounding roads, including those accommodating tourist routes, are deemed to be not significant.
- 7.35 With regards to recreational routes, a significant effect was predicted to occur along Core Path 217: Margree, as the path passes adjacent to the proposed turbines. In addition, significant effects were judged to arise along short stretches along the National Byway and Southern Upland Way to the northwest of the Site when in proximity to the Margree turbines. No significant visual effects were identified upon other recreational routes, including Core Paths, and other recreational and tourism activity.
- 7.36 Comparative wirelines showing the original EIA and the Proposed Development have been produced for all 15 Viewpoint Locations. Updated Visualisations illustrating the

Proposed Development have also been prepared for five of the viewpoints: Viewpoints 2, 3, 4, 5 and 12.

- 7.37 When these Visualisations are reviewed and compared with the equivalent images in the original EIAR, it is recognised that the increase in tip heights of all turbines may mean that the Proposed Development is more visible from certain locations, such as revealing additional blade tip rotations and/or turbine hubs above areas of landform or tree cover, where visibility of the consented turbines was previously more limited.
- 7.38 When considering the assessments made for the 15 representative viewpoints included with the LVIA material for the original EIAR, there is considered to be no change to the magnitude of change predictions previously identified for three of the viewpoints located within approximately 5km of the nearest proposed turbine (Viewpoints 2, 3, and 4). As in each case, when considering the proposed turbines and the consented turbines there would be no discernible change, with each scheme forming equally prominent features against the skyline in views.
- 7.39 Similarly, when appraising the Proposed Development from Viewpoint 8: Southern Upland Way at Waterside Hill; Viewpoint 12: Southern Upland Way at Benbrack (Striding Arch); and Viewpoint 15: Auchengibbert Hill, the magnitude of change is judged to remain as previously predicted in the original EIAR, as the proposed changes would be difficult to discern when considering the distance from the Site and the panoramic nature of views from these elevated locations.
- 7.40 For all remaining viewpoint locations, landform, built form, and/or vegetation, regularly limited the extent of the consented turbines visible; often screening turbines from view or limiting visibility to glimpses of turbine blades. Whilst the proposed changes may bring increased opportunity to view additional blade tips and hubs, it is judged that any rise in visibility levels would create a magnitude of change prediction no more than a degree greater than those identified in relation to the original EIAR, i.e. a Low to Negligible magnitude of change judgment would rise to a Low magnitude of change judgment. In no instance, is the Proposed Development predicted to result in a significant effect at a viewpoint location, where there was previously judged to be no significant visual effects when considering the consented turbines.
- 7.41 With regards to our Site knowledge and understanding of the local area, these images are considered to be appropriately representative of the other visual receptors within the study area. On this basis, it is judged that there would be no further changes attributable to the Proposed Development beyond the level of significant visual effects previously identified in the original EIAR.

Night-time Assessment

- 7.42 The original LVIA material in the original EIAR included an Assessment of Turbine Lighting. This assessment identified that a significant effect upon landscape character during low light conditions, would arise from the visible aviation lighting, up to a distance of 5km. Beyond this distance, it was judged that the effect would be not significant. In turn, significant effects were identified in relation to the aviation lighting upon short sections of the two minor roads to the north and west, as the pass in proximity to the Site. It was also

noted however that radar proximity activated lighting was proposed, such that the lights would be expected to be switched on for less than 2% of the time. No potential significant effects were identified at any of the other surrounding settlements and roads, or in relation to the Galloway Hills Dark Sky Park.

- 7.43 In the original EIA, each turbine was proposed to be fitted with aviation lighting. This remains true of the Proposed Development, with the proposed change in turbine height as part of the Proposed Development, meaning the height of the aviation lights on all turbines is set to slightly increase. In this context, it is not considered that there would be any change to the level of effects identified previously as per the original EIA.

Cumulative Assessment

- 7.44 The potential for significant cumulative landscape and visual effects resulting from the Proposed Development have been considered in relation to other operational, consented, and in-planning schemes with a validated planning application.
- 7.45 For the purposes of Cumulative Assessment, it is recognised that the consented turbines already forms part of the consented baseline, and in this context, the potential for notable cumulative impacts is considered improbable.
- 7.46 The original LVIA material included a cumulative assessment based on a 'cut off' date of 13 July 2020.
- 7.47 To present a proportionate assessment, in each case, consideration was made to those schemes which had the potential to bring about significant cumulative effects when experienced in combination, or in sequence, with the consented turbines, based on experience of the landscape in the field and professional judgement.
- 7.48 Overall, it was identified that there would be minimal significant additional cumulative effects as a result of the introduction of Margree wind farm to a landscape that already features numerous commercial wind energy developments. It was noted that should all the consented schemes be constructed, the addition of the Margree wind farm would reinforce the existing baseline nature of landscape character and views. Similarly, should all the schemes in planning come forward and be constructed, the addition of the Margree wind farm would again reinforce the nature of existing landscape character and views within and towards the Site in which turbines would already be commonplace.
- 7.49 In terms of the overall totality of effect, it was identified that there would be a significant overall effect on the landscape character of the '176- Foothills with Forest' '18a – Stroan unit', which in parts would become a 'windfarm landscape'. It was however identified that the Margree scheme would represent an extension to existing and consented schemes surrounding it and would not therefore introduce turbines to a part of the landscape character area which was not already influenced to some degree by wind energy development.
- 7.50 Since the original LVIA material was prepared, the cumulative situation has further evolved and based on a new cut-off date of 25 March 2025, the following Table summarises the updated cumulative position. The schemes are also illustrated on **Figure 7.10**.

Site	Blade tip height of turbines	Number of turbines	Distance and direction from Margree Site	Landscape Character Type	Change since July 2020
Operational					
Blackcraig Hill	110m	23	0km – south-east	176- Foothills with Forest (18a Stroan unit)	No change
Wether Hill	91m	14	3km - north	178 – Southern Uplands with Forest (19 Ken unit)	No change
Whiteside Hill	121m	11	16km - north	177 - Southern Uplands (19 Nithsdale unit)	No change
Afton	120m/100m	27	14km – north-east	73 Upland Glen - Ayrshire	No change
Windy Standard I	92.5m	36	13km – north-east	177 – Southern Uplands – Dumfries and Galloway (19 Carsphairn unit)	No change
Windy Standard II	100m-120m	30	13km – north-east	177 – Southern Uplands – Dumfries and Galloway (19 Carsphairn unit)	No change
Windy Rig	125m	12	8km – north-west	177 – Southern Uplands – Dumfries and Galloway (19 Carsphairn unit)	Previously at consented stage
Hare Hill Extension*	70m/91m	35	19km - north	81 - Southern Uplands (20A East Ayrshire Southern Uplands	No change
Sanquhar	130m	9	18km-north	177 - Southern Uplands (19 Nithsdale unit)	No change
South Kyle	149.5m	50	17km – north-west	178 – Southern Uplands with Forest (19A Carsphairn unit)	Previously at consented stage
Twentyshilling Hill	140m	9	17km – north-east	177 - Southern Uplands (19 Nithsdale unit)	Previously at consented stage
Consented					
Benbrack	130m	18	17km – north-west	178 – Southern Uplands with Forest (19A Carsphairn unit)	No change
Knockman Hill	81m	5	0km – south-west	176- Foothills with Forest (18a Stroan unit)	No change
Glenshimmeroch	200m	10	0km – north-west	176- Foothills with Forest (18a Stroan unit)	Previously consented at 149.9m
Pencloe	125m	21	18km – north-west	82- Southern Uplands and Forestry (20C Southern Uplands and Forestry)	No change

Sanquhar Six**	130m	6	17km - north	178 - Southern Uplands with Forest (19 Ken unit)	No change
Cornharrow	200m	7	6km – north	178 – Southern Uplands with Forest (19 Ken unit)	Not previously considered
Troston Loch	149.9	14	0km – north	176- Foothills with Forest (18a Stroan unit)	Previously at planning stage
Fell	180-200m	9	5km – south-east	176- Foothills with Forest (18a Stroan unit)	Previously at planning stage
Manquhill	200m	8	6km – north	178 – Southern Uplands with Forest (19 Ken unit)	Not previously considered
Shepherd's Rig	149.9m/125m	17	6.5km – north-west	178 – Southern Uplands with Forest (19 Ken unit)	Previously at planning stage
Divot Hill	200m	9	0km - south	176- Foothills with Forest (18a Stroan unit)	Not previously considered
Sanquhar II	200m/149.9m	44	12km – north	177 - Southern Uplands (19 Nithsdale unit)	Previously at planning stage
Windy Standard III	125m – 177.5m	20	16km – north-west	178 - Southern Uplands with Forest (19A Carsphairn)	Previously at planning stage
In Planning					
Quantans Hill	200m	14	9km – north-west	177 – Southern Uplands – Dumfries and Galloway (19 Carsphairn unit)	Not previously considered
Lorg	200m	10	10.5km – north	178 – Southern Uplands with Forest (19 Ken unit)	Previously consented at 130m-150m
Garcrogo	180m	7	5km – south-east	176- Foothills with Forest (18a Stroan unit)	Not previously considered

*Note: operational Hare Hill Extension would be superseded by Hare Hill Repower Wind Farm, should an application be submitted, which is then granted planning consent.

**Note: the Sanquhar Six scheme was consented; although, it has since been superseded with the Sanquhar II Wind Farm scheme.

7.51 Cumulative ZTVs have been produced for the following schemes which were not previously considered within the LVIA, or now have revised parameters:

- Proposed Development with Consented Glenshimmeroch (revised 200m scheme).
- Proposed Development with Consented Cornharrow (revised 200m scheme).

- Proposed Development with Consented Fell (revised 180m/ 200m scheme).
- Proposed Development with Consented Manquhill.
- Proposed Development with Consented Divot Hill.
- Proposed Development with In-Planning Lorg (revised 200m scheme); and
- Proposed Development with In-Planning Garcrogo.

7.52 The updated cumulative position has also been illustrated in the wirelines included with the updated visualisations prepared for Viewpoints 2, 3, 4, 5 and 12.

7.53 Each of the changes to the cumulative situation are discussed in turn below.

Operational Schemes

7.54 Whilst the Windy Rig, South Kyle, and Twentyshilling Hill schemes are now all operational, each project is situated over 10m from Margree wind farm in a landscape that already features numerous commercial wind energy developments. The addition of these above operational schemes would serve to further reinforce the existing influence of wind energy in the landscape of this part of south-west Scotland. In particular, the tract of the Southern Uplands landscape, which extends south-westwards from the Site. As a result, there is not predicted to be any substantive changes to the findings of the previous cumulative assessment as set out in the LVIA material prepared for the original EIAR.

Consented Schemes

7.55 The Glenshimmeroch and Cornharrow schemes are now consented at an increased height of 200m. Glenshimmeroch would lie to the immediate north, whilst Cornharrow would lie approximately 6km to the northwest of the Site. Divot Hill, which lies to the immediate south of Margree, is also now consented, as is the Fell scheme which lies approximately 5km to the southeast. Furthermore, the Troston Loch turbines, which lie to the immediate north, are now consented. In addition, Manquhill is now consented 6km to the north, along with Shepherd's Rig, 6.5km to the north-west, Sanquhar II, 12km to the northwest, and Windy Standard III, 16km to the northwest.

7.56 The Cornharrow and Manquhill schemes lie immediately adjacent to the existing Wether Hill wind farm and would in effect serve as an extension to this scheme, consolidating the presence of wind energy in this part of the landscape. The consented turbines at Shepherd's Rig are also located northwest of the Site, in the Southern Uplands landscape. The Glenshimmeroch scheme is located adjacent to the consented Troston Loch, as is Divot Hill and Knockman Hill. Fell also lies in proximity. Collectively, these schemes would serve to extend the influence of wind energy to the part of the landscape between the Wether Hill site to the north and the Blackcraig Hill scheme to the south. The Margree scheme would lie in close proximity to existing and consented schemes surrounding it (not withstanding its own extant consent). Consequently, it would not therefore introduce turbines to a part of the landscape character area which was not already influenced to some degree by wind energy development. As such, it is not considered that the consents

awarded to the above consented schemes would alter the findings of the previous cumulative assessment set out in the LVIA material prepared for the original EIAR.

In Planning Schemes

- 7.57 There are three new application stage schemes: Quantans Hill which lies approximately 9km to the northwest; the revised Lorg scheme which lies approximately 10.5km to the north; and Garcrogo, which lies approximately 5km to the southeast.
- 7.58 The introduction of the Quantans Hill scheme would give rise to the theoretical scenario whereby views of the Margree turbines would be seen in the opposite direction of the view to this development from the tract of landscape between the two sites. Based on Site knowledge and an understanding of the local area, there is however considered to be few locations in the intervening landscape where such visibility in opposite directions would arise. Furthermore, the scheme would lie directly beyond the Shepherd's Rig wind farm, with the Glenshimmeroch and Troston Loch projects also within the landscape between Margree and Quantans Hill. As such, there is considered to be no change to the cumulative effects previously identified.
- 7.59 The location of the revised Lorg scheme beyond several other consented schemes is such that it would only serve to reinforce the cumulative effects brought about by those schemes, rather than introducing new effects from a scheme in a different part of the landscape. As such, whilst there may be some minor additional effect, there would be no change to the cumulative effects previously identified.
- 7.60 The Garcrogo scheme lies approximately 5km to the south of Margree, and it is acknowledged that there would be the potential for additional cumulative effects to arise on the landscape character of those parts of the '176- Foothills with Forest' '18a – Stroan unit' landscape between the Garcrogo site and the Margree site, where views of the Garcrogo scheme would be in the opposite direction to the Proposed Development. There would also be a further slight additional effect on that part of the same landscape type which would lie between the proposed sites at Knockman Hill and Divot Hill and the sites at Fell and Garcrogo. There would however be no change to the number or extent of character areas where a significant effect would arise.
- 7.61 From a cumulative visual amenity perspective, the Garcrogo turbines have minimal potential to introduce turbines to a tract of the landscape which was not already in-part characterised by wind energy development in-part as the Garcrogo scheme would lie directly beyond the Blackcraig Hill wind farm. As such, it is considered that any attributable significant effects of the Garcrogo scheme would only serve to consolidate the visual effects that would be brought about by the Proposed Development, which are not thought to be materially different from those set out in the LVIA material prepared for the original EIAR.
- 7.62 When considering the updated cumulative situation, there is the prospect for consequent effects to the night-time assessment as a result of the Quantans Hill, Lorg, and Garcrogo schemes introducing further aviation lighting into the landscape. Whilst there would be some additional cumulative night-time impacts arising from these other proposals, the

cumulative effects would primarily relate to the other schemes, given that the consented turbines already include aviation lighting.

- 7.63 Overall, when comparing the Proposed Development and the original EIA, there would be limited significant additional cumulative effects as a result of the proposed changes, largely owing to Margree wind farm being located in a landscape that already features numerous commercial wind energy developments. When considering the Proposed Development in the updated cumulative context, the additional impact of the proposed turbines would be barely perceptible when considering the greater part of the effect brought about by the other operational, consented, or in-planning schemes.

Summary

- 7.64 Overall, the Proposed Development would represent only a minor change from that of the original EIA, with the landscape and visual effects resulting from the change being highly limited in extent or nature. Indeed, from many locations, the proposed change in Site layout and the increase in tip heights of all turbines would be difficult to perceive. As a result, the proposed changes are considered as unlikely to alter the judgements on the effects set out in the original EIA in any substantive manner.
- 7.65 In that context, it is therefore considered that the same conclusions would continue to apply to the Proposed Development which were applicable to the original EIA. The identified effects on landscape character and visual amenity should be balanced against the wider benefits of Margree wind farm, as further discussed within the Planning Statement. Whilst the LVIA identifies some significant landscape and visual effects, it is noted that locally significant effects on landscape character and visual amenity are inevitable as a result of commercial wind energy development anywhere in the UK and are in line with the expectations of NPF4.

8 CONCLUSIONS

Introduction

- 8.1 Planning permission was granted for Margree Wind Farm at appeal on 21 March 2022 (references 20/2085/FUL and PPA-170-2153) for the erection, 35 year operation and subsequent decommissioning of a wind farm comprising of up to nine wind turbines and associated development. The original planning application was accompanied by an Environmental Impact Assessment Report dated November 2020, referred to in this report as the “original EIAR”.
- 8.2 This Comparative Environmental Impact Assessment Report (Comparative EIAR) is submitted in support of an application made under Section 42 of the Town and Country Planning (Scotland) Act 1997 by Energiekontor UK Ltd (“the Applicant”) to vary conditions 1 and 11 of planning permission 20/2085/FUL to allow a change to the infrastructure layout outwith the micro-siting allowance and to allow a tip height extension of all nine turbines to 220m.
- 8.3 This Comparative EIAR has been prepared by Energiekontor UK Ltd with specialist input where necessary and sets out the findings of a comparative Environmental Impact Assessment which has been undertaken to consider whether the Proposed Development would result in any additional significant environmental effects not identified in the original EIAR for Margree Wind Farm.

Comparative EIA Screening

- 8.4 No topic areas have been identified as having the potential for materially different effects from those reported in the 2020 EIAR. However, to aid decision making an assessment of forestry, ecology and ornithology effects has been undertaken.

Forestry Effects

- 8.5 Felling would be advanced on 97.6 ha for construction of the Proposed Development.
- 8.6 The species composition of the forest would change as a result of the Proposed Development forestry proposals. In particular, the area of Sitka spruce (whether pure or in a mix) would reduce by 31.7 ha.
- 8.7 The area of unplanted ground would increase and, as a result, there would be a net loss of woodland area of 43.1 ha.
- 8.8 In order to comply with the Scottish Government's Control of Woodland Removal Policy, compensation planting would be required to mitigate for the loss of woodland area. The Applicant is committed to providing appropriate compensatory planting.

Ecology Effects

- 8.9 The significance of impact on any of the ecological receptors is, at most, moderate/minor adverse effect.
- 8.10 The impacts detailed for the revised Margree layout, remain the same as those predicted for the consented Margree wind farm application.

Ornithology Effects

- 8.11 The significance of impact on any of the ornithological receptors is, at most, moderate/minor adverse effect.
- 8.12 The impacts for the revised Margree layout, remain the same as those predicted for the consented Margree wind farm application.

Landscape and Visual Effects

- 8.13 The Proposed Development would represent only a minor change from that of the original EIAR, with the landscape and visual effects resulting from the change being highly limited in extent or nature.
- 8.14 Indeed, from many locations, the proposed change in Site layout and the increase in tip heights of all turbines would be difficult to perceive. As a result, the proposed changes are considered as unlikely to alter the judgements on the effects set out in the original EIAR in any substantive manner.
- 8.15 Therefore, it is considered that the same conclusions would continue to apply to the Proposed Development which were applicable to the original EIAR.

Overall

- 8.16 The potentially significant environmental effects associated with the Proposed Development have been considered. There are no additional effects compared to the consented project. No other new potentially significant environmental effects arising from the Proposed Development are predicted which have not already been considered as part of the 2020 EIAR.