

Glenshimmeroch Infrastructure Layout Amendments

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

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1 INTRODUCTION

Background

- 1.1 Planning permission was granted for Glenshimmeroch Wind Farm at appeal on 4 September 2019 (references 18/0992/FUL and PPA-170-2138) for ten wind turbines with tip heights of up to 149.9m and associated infrastructure. A subsequent application was granted permission on appeal on 8 February 2022 to increase the consented tip heights from 149.9m to a mixture of 160m and 180m (references 20/0446/S42 and PPA-170-2149). A further application was granted permission on appeal on 24 March 2023 to increase the consented tip heights from a mixture of 160m and 180m to a mixture of 180m and 200m (references 22/1315/S42 and PPA-170-2169). A further application was granted permission at planning committee on 12 December 2023 to increase the overall tip height of all turbines to 200m (reference 23/1686/S42). The original planning application was accompanied by an Environmental Impact Assessment Report dated June 2018 (herein after referred to as the “original EIAR”) and the most recent tip height increase application was accompanied by a Comparative EIA Report dated July 2023 (herein after referred to as the “Consented Development”) which assessed the modified environmental impacts of the increased tip height.
- 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 conditions 2 and 12 of planning permission 23/1686/S42 to allow a change to the infrastructure layout outwith the micrositing allowance (“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 or Comparative EIAR for Glenshimmeroch Wind Farm.

Site Location and Proposed Development

The Site and its Surroundings

- 1.4 The Site is located approximately 6km north-east of St John's Town of Dalry and 11km west of Moniaive. It consists principally of commercial plantation associated with Glenshimmeroch Hill and Kilnair. Glenshimmeroch farmhouse is located within the south-western part of the Site. The southern part of the Site is primarily used for upland livestock farming and is dominated by acid and marshy grassland. There are a number of watercourses within and surrounding the Site, including Lags Strand and the Black Water which form the northern boundary of the Site. The Lochinvar Reservoir abuts the southern boundary of the Site.
- 1.5 The Site is located within an upland landscape context. It is characteristic of a simple upland landscape and comprises coarse unimproved grassland used for grazing (with

rushes in wetter areas) and coniferous expanses of plantation forestry. Topography within the Site ranges from 220m to 344m Above Ordnance Datum (AOD).

- 1.6 The simple ground cover within the Site is consistent with that of the surrounding area, which encompasses open moorland to the north, west and south (at Culmark Moss, Corseglass and Bogue Moor), as well as continuous expanses of plantation forestry to the east / south east of the Site. There are also further parcels of forestry within wider parts of the surrounding area.
- 1.7 The Site is visually contained by the surrounding topography including Bennan and Fingland to the north, Mackilston and Barleas Hill to the west, Ardoch and Knockman Hill to the south, and Bennan, Wether and Stroan Hill to the east.
- 1.8 The surrounding area is very sparsely settled. There are no settlements within 5km of the Proposed Development. Residential development within the vicinity of the Site is limited to a small number of scattered dwellings / farmsteads linked by minor roads extending across open moorland.

Description of Proposed Development

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

Characteristic	Consented Development	Proposed Development
Number of turbines	10	9
Tip height	200m	200m
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
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 Location	As per Figure 3.1	New substation location as per Figure 1.2
Construction Compound	As per Figure 3.1	New construction compound location as per Figure 1.2.

Table 1.1: Summary of changes due to Proposed Development

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 and changes to the consented access tracks to facilitate the new turbine positions. Some of the changes to the ancillary infrastructure to facilitate the development of the wind turbines are outwith the consented micro-siting allowance.
- 1.11 The Proposed Development also optimises the turbine positions from a spacing perspective, to reduce wake and turbulence interactions. As a result, there is insufficient space to accommodate all ten turbines. Consequently, one wind turbine has been removed from the wind farm layout.
- 1.12 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.
- 1.13 All other elements of the existing planning permission for Glenshimmeroch 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 or Consented Development for the wind farm development.
- 1.12 Four 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; ecology; 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 cultural heritage effects arising from the Proposed Development;
- Section 6 provides an assessment of the ecological effects arising from the Proposed Development; and
- Section 7 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 £50
 - 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 original EIAR and subsequent consented development 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 original EIAR and consented development for the wind farm	In common with all onshore wind farms, the introduction of ten wind turbines would lead to significant landscape and visual effects across a range of receptors. The extent of effects upon landscape character would be limited by the topographic containment of the local area and significant effects would be contained up to 4km from the wind farm. This would include a significant effect upon a localised part of the Stroan unit of the Foothills with Forest LCT. Beyond this there would be no significant effects on landscape character. There would be significant visual effects on a limited number of residential properties in the local area; on road users of two single-track minor roads (the C51S and U141S) to the west of the Site; on users of the Southern Upland Way in close proximity to the Site; and on users of Core Paths 199 and 217. The LVIA impacts were assessed through the original application and found to be acceptable on balance. The subsequent consented development demonstrated there are no additional significant effects identified on landscape character, landscape designations and visual receptors in the day and night as a result of the extension from a mix of 180m-200m to all tip heights at 200m.
Potential for material change / significant effects as a result of the Proposed Development	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 changes to the infrastructure layout.

Comment	While there are changes to the infrastructure layout outwith the micro-siting allowance, all turbines remain within the consented micro-siting allowance. Therefore, no change is predicted.
Ecology and Ornithology	
Key findings from original EIA and consented development for the wind farm	In relation to ecology, no significant effects are predicted in relation to important ecological features, either within the Site itself or the wider area. 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	An update to the Habitat Loss Calculations to account for the proposed layout changes identified minor increases in loss to three habitats that were identified within the Original EIA. It is assessed that these impacts are considered to result in minor adverse effects that are not significant. 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 effects can be found at Chapters 6 of this Comparative EIA.
Cultural Heritage	
Key findings from original EIA and consented development for the wind farm	In relation to direct effects, one heritage asset (remains of a former farmstead building) of negligible importance and sensitivity lies in close proximity to the main site entrance and mitigation measures are proposed to ensure its preservation in situ through avoidance, or an adequate level of recording in the event that the remains cannot be avoided. In relation to indirect effects, there would be indirect effects on the settings of 21 heritage assets that are assessed to be of moderate significance and indirect effects on 40 heritage assets that are assessed to be of moderate/minor significance. None of these effects are significant in EIA terms.
Potential for material change / significant effects as a result of the Proposed Development	The Proposed Development would not lead to any additional direct or indirect effects on any cultural heritage assets, whether designated or otherwise. The magnitude of effect predicted in relation to the indirect effects would remain unchanged.
Comment	Despite the significance of effects remaining unchanged, an update to the Cultural Heritage assessment as a result of the changes to the infrastructure layout can be found at chapter 5.
Noise	
Key findings from original EIA and	Background noise measurements were carried out at a number of locations in order to determine suitable noise limits during the

consented development for the wind farm	original EIAR. The procedure for establishing noise limits is set out in the document ETSU-R-97 Assessment and Rating of Noise from Wind Farms. Environmental noise predictions were made for a range of wind speeds for the proposed wind farm. The predictions found that noise limits established by ETSU-R-97 would be satisfied. Operational noise from the wind farm has been assessed in accordance with national planning guidance and demonstrated to be within acceptable levels.
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 deemed acceptable in the original planning permission and subsequent consented development.
Comment	No change is predicted.
Traffic and Transport	
Key findings from original EIAR and consented development for the wind farm	Disturbance to local residents and other road users due to abnormal load deliveries is a potential negative effect. However, given the low number of vehicles involved and mitigation measures proposed the amount of disturbance would be limited. HGV movements delivering construction materials would also result in negative effects on road users and local residents. The significance of the effects are considered to be low given the short duration of the works, the existing levels of traffic along most of the route and the mitigation measures proposed.
Potential for material change / significant effects as a result of the Proposed Development	The Proposed Development would not materially increase the amount of construction traffic associated with the wind farm nor increase the duration of the construction period.
Comment	No change is predicted.
Soil and Water	
Key findings from original EIAR and consented development for the wind farm	The effects of the wind farm on the hydrological, hydrogeological and geological conditions of the Site are not significant in EIA terms.
Potential for material change / significant effects as a result of the Proposed Development	There is very little peat extraction associated with the original layout (8,168 cubic metres) meaning that less peat would be excavated than required for the reinstatement works. Therefore, peat impacts have been scoped out of the comparative EIAR given the limited excavation required as a result of the changes to the infrastructure layout. A draft Peat Management Plan will be updated via a planning condition prior to construction commencement.
Comment	No change is predicted.

Forestry	
Key findings from original EIAR and consented development for the wind farm	A total area of 22.4ha of trees would be removed to facilitate construction of the wind farm. Suitable compensatory planting would be created within the wind farm application area to comply with the requirements of the Control of Woodland Removal Policy.
Potential for material change / significant effects as a result of the Proposed Development	Felling would be advanced on 115.2 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 42.5 ha. The area of unplanted ground would increase and, as a result, there would be a net loss of woodland area of 46.3 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 to be agreed with SF, 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 EIAR.
Infrastructure and Shadow Flicker	
Key findings from original EIAR and consented development for the wind farm	Wind turbines can interfere with broadcast transmissions such as radio and television. Consultation was undertaken with those organisations whose transmissions may be affected including mobile telephone service providers, emergency services, television companies etc. From the replies received it was predicted that there would be no disturbance to communications systems with the mitigation measures proposed. Wind turbines have the potential to affect aviation safety both through the interference with radar and navigation systems. Rotating wind turbine blades can cast moving shadows which can affect neighbouring properties. As the blades rotate, there can be alternating light and shadow, an effect known as shadow flicker. The effect occurs inside buildings, where the shadow falls on a window. The impact of shadow flicker has been assessed for properties within an arc of 130 degrees either side of north and within 10 rotor diameters (in this case 1.17km) of any turbine position. This assessment has quantified

	the likelihood of shadow flicker effects occurring at nearby properties as a result of the proposed wind farm, along with their times and durations. Overall the effects have been identified as being minor.
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	No change is predicted.

Table 2.1: Comparative EIA Screening Summary

Summary

- 2.10 No topic areas have been identified as having the potential for materially different levels of effect when compared to the original EIAR and Consented Development. However, in order to aid decision making, further assessment has been undertaken in relation to forestry, cultural heritage and ecological effects. These topics are discussed further at sections 4, 5 and 6 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;*

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- 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. The document also includes an updated Wind Farm Landscape Capacity Study prepared by Carol Anderson Landscape Associates as an appendix ("the 2020 DGWLCS").

3.99 The 2020 DGWLCS finds that there is only scope for additional large turbine development (80-150m) in the following landscapes:

- Plateau Moorland (17)
- Plateau Moorland with Forest (17a)
- Foothills with Forest – Ae, Stroan, Eskdale, Oer and Tinnisburn (18a)
- Southern Uploads – NW Lowthers area only (19)
- Southern Uplands with Forest – Ken area (19a).

3.100 The Site is located within the 18a Foothills with Forest Stroan unit. It is therefore one of only a handful of areas within Dumfries and Galloway that has been identified as having scope for additional large turbine development.

3.101 In relation to the Stroan unit the 2016 DGWLCS makes the following comments:

- There are some very limited opportunities for the Large typology (turbines 80-150m) to be sited on broader less prominent hills and ridges set well back from the edge of more settled landscapes such as the Drumlin Pastures (13), Flooded Valley (8) and the Upland Glens (10) landscape types.
- The northern part of this landscape unit is generally less visible from roads and settlements, although there are recreational receptors, such as the Southern Upland Way, Lochinvar, and minor roads plus the Galloway Forest Park.

- Additional turbines should be limited in number with scope greatest for one or two small clustered groupings or very small extensions to consented developments in order to avoid a dominant effect on adjacent smaller scale settled landscapes.
- Development should avoid areas of more complex smaller scale landform commonly found at the transition with the Drumlin Pastures (13) and the Narrow Wooded Valley (4) of the Urr character types and more sensitive mosses and remnant broadleaved woodlands and other planted features.
- Construction access should utilise existing forestry tracks and avoid the highly sensitive network of narrow minor roads within the adjacent Drumlin Pastures (13).
- The sparsely settled nature of this landscape and the relatively limited visibility from areas which are distant from public roads and settlement and the screening provided by forestry.
- An absence of landscape designations.
- All development typologies should avoid impacting on the setting and views to small lochs, on areas of more complex landform, including small but pronounced hills such as Glenvernoch Fell, and on archaeological features as these enrich the landscape of this character type and often provide focus in views.
- Intrusion on key views to the Galloway Hills, for example from the A714 and the Cree Valley, should be avoided.
- Potential cumulative landscape and visual effects with other operational and consented wind farms would need to be carefully considered as this landscape is considered to be close to reaching capacity for additional development. Key cumulative sensitivities are likely to include effects on smaller scale settled landscapes on the outer fringes of this landscape, on the Merrick wild land Area and on views from the south-eastern coast of the Rhins, parts of the Machars, the Galloway Hills and the A75 and A714.

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 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 this Comparative EIAR. This chapter should therefore be read in conjunction with other chapters, for example: Chapter 3: Renewable Energy and Planning Policy; Chapter 5: Cultural Heritage; Chapter 6: Ecology; and Chapter 7: Summary as they are interrelated to the proposed changes in the forest structure.
- 4.6 The responsibility for the management of the remainder of the forest out with the areas required for the construction and operation of the Proposed Development 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 forestry plans; 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 that accompanies the application. 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 2018

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.

4.14 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.

4.15 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.

4.16 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

4.17 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.

4.18 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."

4.19 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.

4.20 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.

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

- 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.

4.22 The stated objective is to increase Scotland's woodland cover from the current 18.5% to 21% by 2032.

Scotland's Third Land Use Strategy 2021-2026

4.23 Scotland's Third Land Use Strategy 2021 – 2026 stresses the importance of forestry in the balancing the demands on land use in Scotland and its transition to a net zero economy. It states: "...there will need to be a significant land use change from current uses to forestry and peatland restoration." This will involve rapidly increasing the pace of woodland and forest creation. To support this, Scotland's Forestry Strategy 2019 – 2029 emphasises the continued protection of Scotland's forest resource.

National Planning Framework 4

4.24 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.

4.25 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

4.26 '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.

- 4.27 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

- 4.28 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 .
- 4.29 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.
- 4.30 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.
- 4.31 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.
- 4.32 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.
- 4.33 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).

- 4.34 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.

Dumfries and Galloway Forestry and Woodland Strategy

- 4.35 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.
- 4.36 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).
- 4.37 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.
- 4.38 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."
- 4.39 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.
- 4.40 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.
- 4.41 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.
- 4.42 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

- 4.43 The Forestry Study Area (FSA), as shown on Figure 4.1, extends to approximately 512.5 ha and comprises of two privately owned and managed woodlands; Glenshimmeroch Forest and Kilnair Forest. These woodlands are covered by two separate Long Term Forest Plans, references: FDP 4887619 and 4139983.
- 4.44 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

- 4.45 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.
- 4.46 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.
- 4.47 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.
- 4.48 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.
- 4.49 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.

- 4.50 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 Proposed Development Forest Plan

Introduction

- 4.51 This Section describes the process by which a typical Proposed Development 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.
- 4.52 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.
- 4.53 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.
- 4.54 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.
- 4.55 In this case, taking into account the ecological constraints as mentioned in Chapter 6: Ecology, 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.
- 4.56 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.

Proposed Development Felling Plan

- 4.57 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 out with that required for the construction phase.

4.58 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 Proposed Development Restocking Species Plan as described below.

4.59 Additional minor felling may 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.

4.60 The resultant Proposed Development 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.

Proposed Development Restocking Species Plan

4.61 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:

- 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.

4.62 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.

4.63 The Proposed Development 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 the individual chapters of this EIAR and their supporting appendices.

Baseline

Baseline Conditions

4.64 The study area consists of conifer forestry located approximately 5m east of St John's Town of Dalry in the south west of Scotland.

4.65 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), and there are no areas identified in the Ancient Woodland Inventory Scotland (Scottish Natural Heritage, 2010). No physical infrastructure is located within these areas.

- 4.66 The study area has suffered from recent weather events resulting in extensive windblow throughout the site. The infrastructure layout described in Chapter 1: Design Rationale takes into account changes within the entire forest structure due to windblow.

Baseline Planting Year/Age Class Structure

- 4.67 Many woodlands established in the mid to late 20th century, 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.
- 4.68 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 2).
- 4.69 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	125.6	24.5
<10 years old	181.6	35.4
10-20 years old	1.2	0.2
21-30 years old	2.3	0.4
31-40 years old	134.2	26.2
41-50 years old	67.7	13.2
Total	512.5	100.0

- 4.70 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

- 4.71 The current baseline species composition of the woodlands within the FSA is shown in Figure 4.3 (Comparative EIA Volume 2) and illustrated in Table 4.2 below.

Table 4.2: Baseline Species Composition

Species	Area (ha)	Area (%)
Sitka spruce	352.4	68.8
Other conifer	24.6	4.8
Mixed broadleaves	10.0	1.9
Open ground	84.7	16.5
Felled (awaiting restock)	40.8	8.0
Total	512.5	100.0

- 4.72 The main species are commercial conifers, principally Sitka spruce, which in pure or mixed stands, accounts for approximately 68% of the total FSA. Other conifers account for 4.8% of the FSA and broadleaf woodland 1.9%. Open ground and other land, including felled areas awaiting restock, accounts for approximately 24.5%.
- 4.73 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

- 4.74 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	84.7	16.5
Phase 1	92.7	18.1
Phase 2	81.3	15.9
Phase 3	22.5	4.4
Long Term Retention	6.4	1.3
Natural Reserve	8.2	1.6
Outside Plan Period	216.6	42.3
Total	512.5	100.0

- 4.75 A proportion of the FSA is designated as "No Felling". This mainly consists of designed open ground as part of the forest design or other unplanted land.
- 4.76 A large proportion of the FSA is designated as "Outside Plan Period". These areas are generally immature crops whose prospective felling year lies outside of the current forest plan period.
- 4.77 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.
- 4.78 Other areas are designated as Long Term Retentions (LTR). These are individual, stable stands and clumps of trees retained for environmental benefit significantly beyond the age or size generally adopted by the woodland enterprise.
- 4.79 Both LTRs and NRs are a requirement of UKWAS and the UKFS.
- 4.80 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 windfirm boundaries between felling coupes are limited.

Baseline Restocking Species Composition

- 4.81 No baseline restocking species data was made available. It has been assumed that any baseline restocking will be carried out in accordance with UKFS.
- 4.82 Due to recent windblow damage within the FSA, the landowners are currently working on putting through appropriate felling amendments to the Long Term Forest Plans to deal with this. Any updates to the plans will be agreed with Scottish Forestry and all restocking requirements will be UKFS compliant. The baseline restocking composition will be amended to reflect these changes.

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 the extent of woodland loss compared against the current baseline species plan.

Proposed Development Felling Plan

- 4.84 The Proposed Development Felling Plan is shown across two figures. Figure 4.5 (Comparative EIA Volume 2) identifies the felling required for construction of the Proposed Development and the advanced felling as a result of the Proposed Development. Figure 4.6 shows the construction felling within the felling phase plan, these data are summarised in Table 4.4 and Table 4.5 below.

Table 4.4: Felling Required for Construction

Felling Type	Area (ha)	Area (%)
No Felling – open ground	84.7	16.5
Infrastructure felling	46.3	9.0
Advanced Felling	68.9	13.4
No Felling – woodland	312.5	61.0
Total	512.5	100.0

- 4.85 The total felling required to accommodate construction of the Proposed Development, including infrastructure and advanced felling, totals 115.2 ha.

Table 4.5: Proposed Development Felling Plan

Fell Phase	Area (ha)	Area (%)
No Felling	84.7	16.5
Phase 1	144.8	28.2
Phase 2	61.8	12.1
Phase 3	13.7	2.7
Long Term Retention	6.3	1.2
Natural Reserve	8.2	1.6
Outside Plan Period	193.1	37.7
Total	512.5	100.0

- 4.86 Table 4.6 below compares the baseline and Proposed Development felling plans.

Table 4.6: Felling Plan Comparison

Fell Phase	Baseline Felling Plan	Proposed Development Felling Plan	Variance	
	Area (ha)	Area (ha)	Area (ha)	Area (%)
No Felling	84.7	84.7	0.0	0.0
Phase 1	92.7	144.8	52.1	10.2
Phase 2	81.3	61.8	-19.5	-3.8
Phase 3	22.5	13.7	-8.8	-1.7
Long Term Retention	6.4	6.3	-0.1	0.0
Natural Reserve	8.2	8.2	0.0	0.0
Outside Plan Period	216.6	193.1	-23.5	-4.6
Total	512.5	512.5	0.0	0.0

- 4.87 There would be advanced felling of 52.1 ha during Phase 1, 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 firm edge or management boundary and the Proposed Development infrastructure will be keyholed into the restocking.

Proposed Development Restocking Species Plan

- 4.89 The Proposed Development Restocking Species Plan is shown in Figure 4.7 (Comparative EIAR Volume 2) and summarised in Table 4.7. Proposed Development open ground refers to the permanent loss of crop to permanent infrastructure only of the Proposed Development.

Table 4.7: Proposed Development Restocking Species Plan Composition

Species	Area (ha)	Area (%)
Sitka spruce	309.9	60.5
Other conifer	25.6	5.0
Mixed broadleaves	9.9	1.9
Open ground	84.7	16.5
Felled (awaiting restock)	36.1	7.0
Proposed Development open ground	46.3	9.0
Total	512.5	100.0

- 4.90 In the absence of a Baseline Restocking Species Plan the Proposed Development Restocking Species Plan has been compared against the current Baseline Species Plan.
- 4.91 Any Long Term Forest Plan amendments which are approved due to windblow will have UKFS compliant restocking requirements; changes due to amendments to the Baseline Restocking Species Plan will be reflected within the Proposed Development Restocking Species Plan, and as such Figure 4.7 is considered holding figure until such amendments have been approved.
- 4.92 The changes that construction of the Proposed Development would have on the species composition of the forests is presented in Table 4.8 below.

Table 4.8: Comparison of Species Plans

Species	Baseline Species	Proposed Development Restock Species	Variance	
	Area (ha)	Area (ha)	Area (ha)	Area (%)
Sitka spruce	352.4	309.9	-42.5	-8.3
Other conifer	24.6	25.6	1.0	0.2
Mixed broadleaves	10.0	9.9	-0.1	0.0
Open ground	84.7	84.7	0.0	0.0
Felled (awaiting restock)	40.8	36.1	-4.7	-0.9
Wind farm open ground	0.0	46.3	46.3	9.0
Total	512.5	512.5	0.0	0.0

4.93 The change in area of stocked woodland in the forests due to the Proposed Development is shown in Table 4.9 below.

Table 4.9: Stocked Woodland Area Comparison

Woodland Types	Baseline Species	Proposed Development Restock Species	Variance	Variance
	Area (ha)	Area (ha)	Area (ha)	Area (%)
Stocked	427.8	381.4	-46.3	-9.0
Unstocked	84.7	131.1	46.3	9.0
Total	512.5	512.5	0.0	0.0

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

- It is assumed that areas of felled land (awaiting restocking) will be restocked in compliance with UKFS and are therefore classed as stocked woodland, other than those areas which will be utilised for Proposed Development infrastructure which will contribute towards the overall woodland loss on site; and
- the net reduction in stocked woodland area within the FSA would be 46.3 ha equivalent to 9.0% of the FSA. The majority of this woodland loss consists of commercial conifer Sitka spruce crops.

4.95 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:

- changes to the infrastructure layout (due in part to extensive windblow);
- changes to turbine tip height; and

- changes to infrastructure buffers.

4.96 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

4.97 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 46.3 ha.

4.98 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

4.99 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.

4.100 Further guidance is contained in the document LUPS-GU27, 'Use of Trees Clear Felled to Facilitate Proposed Development on Afforested Land'" (SEPA, 2014) .

4.101 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.

- 4.102 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.
- 4.103 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.
- 4.104 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.
- 4.105 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.
- 4.106 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

- 4.107 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.
- 4.108 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.
- 4.109 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.

- 4.110 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.
- 4.111 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

- 4.112 Proposed Development 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 only as to the restocking methodology which may be adopted.
- 4.113 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.
- 4.114 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

- 4.115 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

- 4.116 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

- 4.117 The total study area extends to 512.5 ha and is comprised of two woodlands which are privately owned and managed.
- 4.118 Felling would be advanced on 115.2 ha for construction of the Proposed Development.
- 4.119 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 42.5 ha.
- 4.120 The area of unplanted ground would increase and, as a result, there would be a net loss of woodland area of 46.3 ha.
- 4.121 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 CULTURAL HERITAGE

Introduction

- 5.1 This updated Cultural Heritage Assessment considers the potential impacts on cultural heritage assets within the site boundary from the construction phase of the Proposed Development. The assessment identifies all cultural heritage assets within the site boundary and how the construction of additional access tracks, repositioning and reorientation of crane pads, change in borrow pit location and removal of one turbine will impact on these assets.

Construction Impacts

- 5.2 A former group of clearance cairns (17), of negligible sensitivity, were previously recorded within a proposed borrow pit area east of turbine GT01. Field survey could find no trace of the clearance cairns within this area which is presently mature commercial forestry and where there is an old forestry borrow pit. It is likely that the clearance cairns have been destroyed by forestry ploughing and drainage works. As no remains of the clearance cairns now survive, they would not be affected by excavation of the proposed borrow pit and would not require mitigation.
- 5.3 Two alleged cup-marked rocks (18d and 18e), of local/negligible sensitivity, lie within a proposed borrow pit area east of turbine GT01. The cup-marked rocks were originally recorded in 1969 but subsequent field visit in 1978 by the Ordnance Survey recorded that the majority, if not all, of the depressions are natural features. Field survey in 2018 for the Glenshimmeroch Wind Farm EIA confirmed the Ordnance Survey interpretation that the supposed cup-marks on the rock outcrops all appear to be natural. Taking into account that it is presumed these cup marks are natural depressions it is considered that this would be an impact of negligible significance (not significant in EIA terms), and would not require mitigation.
- 5.4 One former fodder store (23) lies within the proposed location of turbine GT05 and its associated hardstanding. The exact condition of this hay ree is unknown, however, its location now lies within an area of dense commercial forestry, and it is likely that any remains have been destroyed by forestry ploughing and drainage works. If any remains do survive these are assessed as being of no more than of negligible sensitivity. Excavation of the turbine foundation could, without mitigation, result in a direct impact on any surviving remains of the fodder store. Taking into account that it is presumed this asset has been removed or in very poor condition it is considered that this would be an impact of negligible significance (not significant in EIA terms), and would not require mitigation.
- 5.5 One former hay ree (24) lies within the area of a proposed borrow pit to the northeast of turbine GT06. This exact condition of this hay ree is unknown, however it is not depicted on the 1981 1:10,000 Ordnance Survey map suggesting that it had been removed by this date. The location for the hay ree now lies within an area of dense commercial forestry and it is likely that any remains have been destroyed by forestry ploughing and drainage works. If any remains do survive these are assessed as being of no more than of negligible sensitivity. Excavation of the borrow pit could, without mitigation, result in a direct impact on any

surviving remains of the hay ree. Taking into account that it is presumed this asset has been removed or in very poor condition it is considered that this would be an impact of negligible significance(not significant in EIA terms), and would not require mitigation.

6 ECOLOGY

Introduction

- 6.1 The Proposed Development includes all infrastructure changes that are outwith the consented micrositing allowance. This includes additional access tracks to improve connectivity throughout the Development, the repositioning and reorientation of crane pads to account for micrositied turbine locations, change in borrow pit location and the removal of one turbine. This section of the Comparative EIAR provides an updated assessment in relation to potential impacts on habitats as a result of the proposed changes to the layout of the Development. Whilst there are additional ecological features present, such as protected mammals, it is not considered that the infrastructure changes will result in any change to the original assessment.

Methodology

- 6.2 No additional surveys were undertaken as part of this update and the assessment is based on existing habitat survey information as provided within the Original EIAR. This is considered appropriate as there is not considered to have been any change to the habitats present within the site boundary in the interim time, as habitats such as acid grassland and bog habitats are typically slow to change, and there has been no changes to the forestry in the interim time.
- 6.3 Methods, results and assumptions provided in the Original EIAR and Consented Development are not repeated here, and only changes to the previously reported Habitat Loss Calculation (HLC) results arising from the changes to the layout of the Proposed Development are presented, along with an updated impact assessment based on these results.
- 6.4 The construction of the Development would result in some permanent habitat loss within the infrastructure footprint (e.g. access road/tracks, turbine bases, crane hardstandings, substation etc.), and HLC are used to quantify the extent of this loss. The HLC undertaken within this report followed the methodology undertaken for the assessment within the Original EIAR and did not differentiate between permanent and temporary loss, therefore the results provided are considered to be a worst case scenario as some construction areas will be reinstated following construction (e.g. the construction compound, borrow pits) and therefore only represent temporary habitat loss. The HLC were carried out using a bespoke tool developed within QGIS version 3.34. This tool imports shapefiles representing the different infrastructure of the Development, as well as a shapefile containing the Phase 1 habitat classifications across the site based on the results of the field surveys undertaken to support the Original EIAR. Each infrastructure polygon is clipped by the site boundary and then intersected with the habitat shapefile to allow calculation of the area of each habitat type that would be lost due to construction of that infrastructure feature within the site boundary. Any overlap in infrastructure features is dealt with in a hierarchical way in order to avoid the inclusion of the same areas of habitat more than once.

Results

- 6.5 The majority of the habitat surveyed within Glenshimmeroch Wind Farm consists of coniferous plantation, with the second most common habitat being marshy grassland. Two figures are provided to support this report, Volume II Figure 6.1 shows the consented layout and Phase 1 habitat types, and Volume II Figure 6.2 shows the updated layout and Phase 1 habitat types. The results of the consented and updated HLC are provided in Table 6.1 below.
- 6.6 Based on habitats recorded within the Phase 1 habitat survey, there have been very small increases in habitat loss for two habitats classed as an Important Ecological Feature (IEF) in the EIAR; blanket bog and marshy grassland. Loss of these habitats have increased from 0.01 ha to 0.12 ha (an additional 0.11 ha) and 1.20 ha to 1.25 ha (an additional 0.05 ha) respectively. One additional IEF habitat that was not identified within the EIAR as being impacted will have small losses as a result of the proposed changes; Standing water (oligotrophic). These habitats are discussed further in 'Discussion' below.
- 6.7 In addition, an increase in habitat loss has also been identified in one habitat not considered to be an IEF; acid grassland. Due to the extensive amount of this habitat present within the Development and the wider area, and in line with the assessment for this habitat presented in the EIAR, acid grassland is considered to be of low ecological importance and is not considered further.

Table 6.1: Consented and updated HLC values for Glenshimmeroch Wind Farm (habitats in bold have increased in loss)

Phase 1 Habitat Type	IEF?	Total Area within the Site	Extent Lost within the Site (ha): Original EIAR	Extent Lost within the Site (ha): Proposed Development
Acid Grassland	No	32.07	0.26	0.31
Blanket Bog	Yes	20.53	0.01	0.12
Continuous Bracken	No	10.52	0.01	0.003
Recently-felled coniferous woodland	No	34.58	3.55	3.25
Marsh/marshy Grassland	Yes	124.37	1.20	1.25
Plantation coniferous woodland	No	420.11	22.36	20.10
Standing Water (oligotrophic)	Yes	0.007	0	0.03

Source: Natural Power 2019, 2025

Discussion

- 6.8 Following the update to the HLC as a result of the proposed changes to the infrastructure layout of the Proposed Development, three habitats have been identified that are IEFs

which will have small increases in habitat loss; blanket bog, marshy grassland and standing water (oligotrophic). The updated HLC identified increases of 0.11 ha (1100 m²), 0.05 ha (500 m²) and 0.03 ha (300 m²) for these habitats respectively.

- 6.9 Whilst blanket bog and marshy grassland habitats were identified as an IEF with a small amount of habitat loss calculated within the Original EIAR, the assessment identified that following the implementation of embedded mitigation, effects of the Development on these habitat types would be negligible and not significant. Embedded mitigation for the consented Development includes a Construction Environment Management Plan (CEMP) which will detail mitigation measures for the protection of habitats during the pre-construction, construction and post-construction phases, and require an environmental / Ecological Clerk of Works (ECoW) to audit compliance with these measures. Following consent, planning condition requirements for the consented Development include the need for an ECoW and a CEMP to include protection plans for species and habitats and a Habitat Management Plan (HMP). It is assumed that these planning condition requirements will be applicable to this S42 application. As such, given the minor increase in habitat loss for blanket bog and marshy grassland, it is considered that this embedded mitigation is sufficient to provide compensation and will result in an overall enhancement to blanket bog and associated wetland habitats as a result.
- 6.10 As shown in Table 6.1, the updated HLC identified habitat loss on one previously unaffected IEF, standing water (oligotrophic). Open water is a priority habitat on the Dumfries and Galloway Local Biodiversity Action Plan, and within the Original EIAR, negligible effects were identified on it, although embedded mitigation was included in order to protect watercourses and to comply with legislation. As shown on Figure 6.2, the pond to be lost is located to the north of the Development within a quarry where a change in location is proposed for a borrow pit. This habitat was identified in the Original EIAR and is shown on both Figures as Target Note 4. It is described as a pond located in an old quarry site with tadpoles, dragonflies and macrophyte cover including bog pondweed and common spike-rush. Whilst surveys were not undertaken for great crested newt within the Original EIAR they were considered to be absent due to the lack of records from the local area. Standing water (oligotrophic) was considered to be a locally important IEF within the Original EIAR but as no impacts were anticipated as a result of the Development, it was assessed that there would be negligible effects on this habitat assuming embedded mitigation was included in relation to amphibians. Whilst 0.03 ha of habitat will be lost as a result of the proposed changes in infrastructure layout, this is a small area and as such it is considered that while these effects would be minor adverse, they will not be significant at the local level. Following the implementation of embedded mitigation during construction and appropriate compensation and mitigation within a HMP, effects would be minor beneficial and not significant.
- 6.11 Should consent be granted for the S42 application, it is recommended that measures are included within the CEMP and HMP which will compensate for the minor loss and provide enhancements for blanket bog and standing water habitats.

Summary of Effects

- 6.12 An update to the HLC as a result of the proposed layout changes identified minor increases in loss to three habitats that were identified within the Original EIAR as IEFs; blanket bog,

marshy grassland and standing water (oligotrophic). It is assessed that these impacts are considered to result in minor adverse effects that are not significant. Embedded mitigation already required as part of the consented Glenshimmeroch Wind Farm includes the presence of an ECoW and the implementation of a CEMP and HMP. Should consent for the S42 application be granted, it is recommended that measures are included within the CEMP and HMP which will compensate for the minor loss and provide enhancements for blanket bog, marshy grassland and standing water (oligotrophic) habitats. Following the implementation of this, effects on these habitats are considered to be minor beneficial and not significant.

7 CONCLUSIONS

Introduction

- 7.1 Planning permission was granted under Section 42 of the Town and Country Planning (Scotland) Act 1997 at planning committee on 12 December 2023 to increase the overall tip height of all turbines to 200m at Glenshimmeroch Wind Farm (reference 23/1686/S42).
- 7.2 This Comparative Environmental Impact Assessment Report is submitted in support of an application made under Section 42 of the Town and Country Planning (Scotland) Act 1997 by Energiekontor UK Ltd to vary conditions 2 and 12 of planning permission 23/1686/S42 (Consented Development) to allow a change to the infrastructure layout outwith the micrositing allowance.
- 7.3 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 and Consented Development.

Comparative EIA Screening

- 7.4 No topic areas have been identified as having the potential for materially different effects from those reported in the Original EIAR and Consented Development. However, to aid decision making an assessment of forestry, cultural heritage and ecology effects has been undertaken.

Forestry Effects

- 7.5 The total study area extends to 512.5 ha and is comprised of two woodlands which are privately owned and managed.
- 7.6 Felling would be advanced on 115.2 ha for construction of the Proposed Development.
- 7.7 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 42.5 ha.
- 7.8 The area of unplanted ground would increase and, as a result, there would be a net loss of woodland area of 46.3 ha.
- 7.9 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.

Cultural Heritage Effects

- 7.10 The significance of impact on any of the Cultural Heritage Assets assessed as part of this Comparative EIAR remain as being at most, negligible impact (not significant).
- 7.11 The Proposed Development would not lead to any additional direct or indirect effects on any cultural heritage assets, whether designated or otherwise. The magnitude of effect predicted in relation to the indirect effects would remain unchanged.

Ecology Effects

- 7.12 An update to the HLC as a result of the proposed layout changes identified minor increases in loss to three habitats that were identified within the Original EIAR as IEFs; blanket bog, marshy grassland and standing water (oligotrophic). It is assessed that these impacts are considered to result in minor adverse effects that are not significant. Embedded mitigation already required as part of the consented Glenshimmeroch Wind Farm includes the presence of an ECoW and the implementation of a CEMP and HMP. Should consent for the S42 application be granted, it is recommended that measures are included within the CEMP and HMP which will compensate for the minor loss and provide enhancements for blanket bog, marshy grassland and standing water (oligotrophic) habitats. Following the implementation of this, effects on these habitats are considered to be minor beneficial and not significant.

Overall

- 7.13 The potentially significant environmental effects associated with the Proposed Development have been considered. There are no additional effects arising compared with the Original EIAR and Consented Development. No other new potentially significant environmental effects arising from the Proposed Development are predicted which have not already been considered as part of the Original EIAR and Consented Development.