ScottishPower Renewables

Hare Hill Windfarm Repowering and Extension

Environmental Impact Assessment Report

Volume 4

Non-Technical Summary

November 2025

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Abbreviations

Abbreviation	Description
AD	Air Defence
ATS	Air Traffic Services
CNS	Communication, Navigation and Surveillance
DGC	Dumfries and Galloway Council
DGLDP2	Dumfries and Galloway Local Development Plan 2
EALDP2	East Ayrshire Local Development Plan 2
EAC	East Ayrshire Council
EIA	Environmental Impact Assessment
ECU	Energy Consents Unit
EMP	Environmental Management Plan
FSA	Forestry Study Area
GHG	Green House Gas
GVA	Gross Value Added
Ha	Hectare
HES	Historic Environment Scotland
HGV	Heavy Goods Vehicle
HH	Hare Hill
HHE	Hare Hill Extension
HHW	Hare Hill Windfarm
IEMA	Institute of Environmental Management and Assessment
ISEP	Institute of Sustainability and Environmental Professionals (formerly IEMA)
km	Kilometers
LNCS	Local Nature Conservation Sites
LPA	Local Planning Authority
m	Metre
MW	MegaWatt
NATS	National Air Traffic Services
nm	Nautical Miles

NPF4	National Planning Framework 4
NTS	Non-Technical Summary
PSR	Primary Surveillance Radar
PWS	Private Water Supply
PWSRA	Private Water Supply Risk Assessment
RLoS	Radar Line of Site
RSPB	Royal Society for Protection of Birds
SAC	Special Area of Conservation
SPA	Special Protection Area
SPP	Species Protection Plan
SSSI	Site of Special Scientific Interest
SEPA	Scottish Environmental Protection Agency
SSR	Secondary Surveillance Radar
UK	United Kingdom

1. Preface

1. This document is the Non-Technical Summary (NTS) of the Environmental Impact Assessment (EIA) Report and has been prepared as a supplementary document of the Section 36 consent application submitted by ScottishPower Renewables (UK) Limited (hereafter named 'the Applicant') for the proposed Hare Hill Windfarm Repowering and Extension (the 'proposed Development').

2. The proposed Development is situated between the towns of Kirkconnel in Dumfries and Galloway and New Cumnock in East Ayrshire. The proposed Development straddles the administrative boundaries of East Ayrshire Council (EAC) and Dumfries and Galloway Council (DGC) as shown in **Figure 1.1**.

3. The EIA Report comprises 4 volumes:

   - **Volume 1**: Main Written Statement of the EIA.
   - **Volume 2(a and b):** Figures and Visualisations.
   - **Volume 3:** Technical Appendices.
   - **Volume 4**: Non-Technical Summary.
   - The application is also supplemented by accompanying documents:
     - Planning and Renewable Energy Statement
     - Design and Access Statement
     - Socio-Economics, Tourism and Recreation Assessment Report
     - Pre-Application Consultation Report

4. Printed Copies of this NTS are available free of charge from the following address:

   ScottishPower Renewables
   9th Floor, ScottishPower House
   320 St Vincent Street
   Glasgow
   G2 5AD

   Email: harehillrepower@scottishpower.com

5. The NTS is available free of charge, and a limited number of hard copies of the EIA Report are available for £1,000 per copy. The price of the hard copy reflects the costs of producing all of the Volumes as well as the Landscape and Visual visualisations.

6. The NTS and EIA Report (including figures and technical appendices) are also available free of charge in electronic format. These PDF files can also be downloaded for free from the Hare Hill Windfarm Repowering and Extension website at:

   https://www.scottishpowerrenewables.com/pages/hare_hill_windfarm_repowering.aspx

Alternatively, a USB memory stick containing PDF files of the EIA Report are available for £15 per USB. Specific sections of the EIA Report are also available on request at a proportionate cost.

7. In the interest of sustainability and in keeping with the renewable energy agenda, the paperless (USB) version is recommended.

1.1. Representations to the Application

8. Any representations on the application may be submitted via www.energyconsents.scot, using the relevant Project Name and/or ECU reference number. Please note that you must be in possession of a working email address to submit a representation virtually.

9. Representations can also be sent by post to:

Scottish Government
Energy Consents Unit
4th Floor
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

2. Introduction

10. This NTS summarises the EIA Report for the proposed Development.

11. The Applicant intends to submit an application for the proposed Development under Section 36 of the Electricity Act 1989. To inform the application, the Applicant has undertaken an EIA and produced its findings in this EIA Report. The EIA Report informs readers of the nature of the proposed Development, and likely significant environmental effects and measures proposed to protect the environment, during site preparation, construction, and operation.

12. The 'Site' is the area within the application boundary in which the proposed Development lies, as shown in **Figure 1.2**. The Site lies to the north east of the Afton Reservoir and Blackcraig Hill, south east of New Cumnock and west of Kirkconnel. There are a number of burns and small watercourses across the Site. The Site is made up of undulating hills of upland heath and moorland with areas of commercial forestry.

13. The Site is located approximately 1.5 kilometres (km) southeast of the village of New Cumnock and 4.5 km west of Kirkconnel. The Site location is shown in **Figure 1.1.**

14. The proposed Development would comprise up to 23 wind turbines, with associated infrastructure. The turbines would have a maximum tip height of 200 metres (m) and have a range of tip heights including: 150, 180 and 200 metres (m) to tip. It would have a generating capacity in excess of 130MW. The proposed Development is described in further detail in **Chapter 5: Development Description** of the EIA Report.

15. The proposed Development is spread across both the administrative boundaries of Dumfries and Galloway and East Ayrshire centred on National Grid Reference (NGR) NS 65411 08094.

2.1. The Applicant

16. The Applicant is part of the ScottishPower group of companies operating in the UK under the Iberdrola Group, one of the world's largest integrated utility companies and a world leader in wind energy. ScottishPower only produces 100% green electricity – focusing on wind energy, smart grids and driving the change to a cleaner, electric future. The company has committed to investing over £8 million every working day to make this happen and is committed to speeding up the transition to cleaner electric transport and improving air quality to deliver a better future, quicker for everyone.

17. The Applicant is at the forefront of the development of the renewables industry through pioneering ideas, forward thinking and outstanding innovation. Its ambitious growth plans include expansion of its existing onshore wind portfolio, investment in new large-scale solar deployment and innovative grid storage systems including batteries. The company is also delivering the Iberdrola Group's offshore windfarms in the Southern North Sea off East Anglia.

18. With over 40 operational onshore windfarms, the Applicant manages all its sites through its world leading Control Centre at Whitelee Windfarm, near Glasgow.

2.2. The Consultants

19. The proposed Development has been designed and assessed by the Applicant in association with its lead consultants, Natural Power Consultants Ltd. (Natural Power). Natural Power has been appointed to coordinate and produce this EIA Report and associated EIA documentation.

20. Natural Power has been providing expertise to the renewable energy industry since the company was formed in 1995 and is one of Scotland's and the UK's leading renewable energy consultants. Natural Power currently employs over 500 people working full time providing renewable energy services nationally and internationally.

21. Natural Power has undertaken the following assessments;

    - Hydrology, Geology and Hydrogeology;
    - Access, Traffic and Transport;
    - Ecology and Biodiversity; and
    - Other Issues

22. Natural Power have been supported in the production of the EIA Report by the following consultants:

    - MVGLA (Landscape and Visual Impact Assessment);
    - Kiloh Associates (Layout Design and Aggregates Assessment);
    - WSP (Ornithology);
    - CFA (Archaeology and Cultural Heritage);
    - Cyrrus (Aviation and Existing Infrastructure);
    - Hoare Lea (Noise and Vibration); and
    - BiGGar Economics (Socio-economics, Recreation and Tourism).

3. Legal and Policy Framework

3.1. Legislative Context

23. As the capacity of the proposed Development exceeds 50 MW an application under Section 36 of the Electricity Act 1989 is being made to the Scottish Government's Energy Consents Unit (ECU).

24. Section 36 applications are further subject to the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations). Under the EIA Regulations, the proposed Development is considered to have the potential, if uncontrolled, to cause significant effects on the environment and must follow the EIA process and an EIA Report must be submitted in support of the application.

3.2. Environmental Impact Assessment

25. The potential of environmental effects of the proposed Development have been assessed to measure their significance. Mitigation of potential effects is proposed where possible to prevent, reduce or offset significant potential effects. The assessment of cumulative effects must also be considered within the EIA. These effects are a result of the overall picture of similar developments within the area, showing the combination of currently operational, developments in planning.

3.3. Renewable Energy Policy

26. In recent years, the United Kingdom (UK) and Scottish Government Policies have focussed on increasing concerns about climate change. Each tier of Government has developed targets, policies and actions to deal with the climate crisis and generate more renewable energy and electricity.

27. The UK Government retains the responsibility for the overall direction of energy policy, although some elements are devolved to Scottish Government. The UK Government has published a series of policy documents setting out how targets can be achieved. Onshore wind generation, located in Scotland, is identified as an important technology to achieve these various goals.

28. The Scottish Government has published a number of policy documents and its own targets. The most relevant policy, legislative documents and more recent statements published by the Scottish Government include:

    - The Scottish Energy Strategy (2017);
    - The Scottish Government's declaration of a Climate Emergency (2019);
    - The Scottish Climate Change Plan, Securing a green recover on a path to net zero: climate change plan 2018-2032 - Update (2020);
    - The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 and the legally binding net zero target for 2045 and interim targets for 2030 and 2040;
    - The Scottish Government's 'Programme for Government' (2023);
    - The Onshore Wind: Policy Statement (2022); and
    - The Draft Energy Strategy and Just Transition Plan (2023).

3.4. National Planning Policy

29. The National Planning Framework (NPF4) was adopted by the Scottish Government in February 2023 (updated in 2024). NPF4 is a long term plan for Scotland setting out where development and infrastructure is needed.

30. The proposals in NPF4 are intended, amongst other things, to:

    - Enable more renewable energy generation – outside National Parks and National Scenic Areas, to support the transition away from reliance on fossil fuels; and

- Support emerging low-carbon and zero-emissions technologies, including hydrogen and carbon capture, and developments on land that unlock offshore renewable energy, such as the expansion of the electricity grid.

3.5. Local Planning Policy

3.5.1. Dumfries and Galloway Local Development Plan

31. The Dumfries and Galloway Local Development Plan 2 (DGLDP2) (Dumfries and Galloway Council, 2019) was adopted on 3 October 2019 and provides a planning framework for the future developments within Dumfries and Galloway. The framework gives guidance for future developments within Dumfries and Galloway over the next ten years while outlining the potential development opportunities available. The Council states that "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."

32. The DGLDP2 recognises that action is needed to address the pressures of climate change and therefore has outlined polices specific to renewable energy developments. The DGLDP2 has included a spatial framework specifically for development of wind energy and provides two policies that directly support the Proposed Developable Area. The policies being IN1: Renewable Energy and IN2: Wind Energy.

33. A full assessment of a planning framework for the future developments within Dumfries and Galloway in included in the Planning and Renewable Energy Statement submitted in support of this S36 application.

3.5.2. The East Ayrshire Local Development Plan 2 (EALDP2) 2024;

34. East Ayrshire Local Development Plan 2 (EALDP2) (East Ayrshire Council, 2024) was adopted in April 2024. The EALDP2 provides guidance on how East Ayrshire should be developed over the next 10-20 years.

35. A full assessment of EALDP2 in included in the Planning and Renewable Energy Statement submitted in support of this S36 application.

4. Approach to EIA

36. The EIA Report has been prepared in line with the EIA Regulations. The purpose of the EIA is to assess the potential significant effects of a project or development proposal on the environment. The EIA Regulations require the EIA Report to describe the proposed Development, the likely significant effects, measures to mitigate in accordance with the mitigation hierarchy and any other information relevant to the specific characteristics of the proposed Development. The scope of the EIA Report was the subject of a formal scoping opinion from The Scottish Government ECU on behalf of the Scottish Ministers under the EIA Regulations. This included formal consultation with EAC and DGC, and with other consultees including the Scottish Environment Protection Agency (SEPA), NatureScot, Historic Environment Scotland (HES), Transport Scotland, RSPB Scotland and the Defence Infrastructure Organisation.

37. During the preparation of this EIA Report site visits, surveys and desktop assessments, in line with relevant guidance, were carried out to ascertain the potential impacts of the proposed Development on the environment and mitigation measures to be applied. A review of planning and other relevant policies was also undertaken to inform the assessment process and ensure the proposed Development adequately considered local and national policy. Where relevant each EIA Report chapter considers the baseline environment, the likely significant effects for each phase of the proposed Development, any required mitigation and cumulative impacts.

38. The application is also supplemented by an accompanying Planning and Renewable Energy Statement, Design and Access Statement, Socio-Economics, Tourism and Recreation Assessment Report and a Pre-Application Consultation Report.

5. Site Selection and Design Evolution

39. The site selection process the Applicant follows is designed to identify renewable energy sites that are financially and technically viable, with acceptable environmental impacts. This includes the repowering of their portfolio of current operational windfarm sites. The sites selected aim to make meaningful contributions to Scotland's targets for renewable energy generation.

40. The Site has been tested against numerous criteria that the Applicant uses to design renewable energy development projects. As the wider area is currently being used for both the original Hare Hill (HH) and Hare Hill Extension (HHE) Windfarms, the presence of these operational windfarms indicates the locale to be an appropriate location for windfarm development with a good wind resource. The infrastructure currently on-site will be re-used and/or modified, wherever feasible, to minimise the scope of repowering works required if the proposed Development is consented. There are no areas within the application boundary designated for their natural or heritage interests such as Special Area of Conservation (SAC), Special Protection Area (SPA) and designated heritage assets. There is one Site of Special Scientific Interest (SSSI) which is also a Geological; Conservation Review Site. Proposed infrastructure has been positioned at a similar distance to the current operational windfarm from this feature. In addition to the operational windfarm's access tracks, the Site is also traversed by an existing track through commercial forestry. The existing track through the commercial forestry will not be used for turbine delivery or HGVs and will be restricted for use by small vehicles (cars and vans) only.

41. The Applicant has designed the proposed Development taking into account operational requirements, environmental sensitivities and landscape constraints. In particular, attention has been paid to landscape studies and proximity to residential receptors. Information on the environmental, landscape and technical constraints has been collected by the EIA team through site surveys, technical studies and consultation, which has been used to review and refine the design of the proposed Development. The location and sensitivity of relevant identified environmental receptors have been mapped, and appropriate buffers were agreed between the technical specialists and project engineers, which allowed the design of the Site to be finalised. This approach has

ensured the proposed Development would avoid the most sensitive environmental areas and significantly reduce potential impacts through design-based mitigation.

42. The Applicant initially investigated development scenarios up to 27 turbines, with turbines up to 250 m to tip height. This scenario was promoted prior to detailed EIA studies which was also used as the development criteria for the scoping submission. The design scenario was subsequently modified through a design chill to retain a 25-turbine layout, but with the candidate turbines ranging from 150 m, 180 m and up to 200 m to tip. The iterative design process has culminated in the final layout which now includes 23 turbines with the varying heights of 150 m, 180 m and up to 200 m to tip, along with locations of associated infrastructure, substation and access tracks. The final layout has been informed by detailed multidisciplinary assessment and considered environmental constraints, balanced by technical requirements.

43. Taking these constraints into account and considering the construction requirements of such a project, the Applicant has developed a design which it believes is best suited to the Site and its surroundings.

44. The final design layout of the proposed Development comprises a layout of 23 turbines, 7 with a maximum height of 200 m, 9 with a height of 180 m and 7 with a maximum height of 150 m (to vertical turbine blade tip), hardstanding's, circa (c.) 29 km of access track (c.23km of which is new), and associated infrastructure, blade laydown areas, substation and ancillary infrastructure. The proposed Development layout is shown in **Figure 5.1**.

6. Development Description

6.1. Location & Site

45. The proposed Development is located approximately 1.5 kilometres (km) south east of the village of New Cumnock and 4.5 km west of Kirkconnel (**Figure 1.1**) The application boundary **(Figure 1.2)** and the area within (the Site) is across both the East Ayrshire and Dumfries and Galloway administrative areas.

46. Regarding the physical attributes, there are a number of burns and small watercourses across the Site. The Site is made up of undulating hills of upland heath and moorland with areas of commercial forestry. The Site lies north east of the Afton Reservoir and Blackcraig Hill, south east of New Cumnock and west of Kirkconnel.

47. The current operational site containing HH and HHE, known as 'Hare Hill Windfarm' (HHW) has a total of 55 turbines. HH has 20 turbines with an output of 13.2 MW. It has been operational since 1999 and is one of Scotland's oldest windfarms. HHE comprises 35 turbines with an output of 30 MW. HHE has been operational since 2017. The HH turbines are situated towards the northern area of HHW with HHE turbines extending towards the south east. The proposed Development will incorporate both of these areas and extend further to the south east.

48. The access to the proposed Development is from the A76 east of New Cumnock. The access track rises through an area of moorland which then leads west to the first of the HH turbines. The track continues to the west connecting the small track spurs to each of

the HH turbine hardstandings. The access track then turns south east and continues in this direction connecting with the three spurs of the HHE turbines.

6.2. Proposed Development Overview

49. The proposed Development would comprise turbines, crane hardstanding's, a substation, networks of connecting tracks and associated infrastructure. The centre of the Site is at NS 65411 08094. The access would be from the A76 public road. Additionally, the proposed Development would include areas for habitat improvement as outlined in **Technical Appendix 7.4 & Figure 7.4.1** . The proposed Development layout is provided in **Figure 5.1.**

50. The proposed Development would involve the construction of up to 23 wind turbines: 7 with a maximum tip height of 200 metres (m); 9 with a maximum tip height of 180 m; and 7 with a maximum tip height of 150 m, with associated ancillary infrastructure (**Figure 5.1**).

51. It is expected that each wind turbine would have a rated capacity of the following:

- 200 m to tip – circa (c.) 6.2 MW;
- 180 m to tip – c.6 MW; and
- 150 m to tip – c.4.5 MW.

52. This would give the proposed Development an anticipated capacity of c.130 MW.

6.2.1. Proposed Development Phasing

53. The proposed Development will be split across two distinct phases:

- Phase 1 would commence following the decommissioning of HH and involve the construction of 15 new turbines (T1 – T15); and
- Phase 2 would commence following the decommissioning of HHE and involve the construction of 8 new turbines (T16-T23).

Table 6.1 – Proposed Development Indicative Phasing Timeline

	2030	2031	2032	2033	2034	2035	2036	2037	2038 (Onwards)
Hare Hill Decommissioning									
Construction									
Operation									
Hare Hill Extension Decommissioning									
Construction									
Operation									

54. The primary reason leading to the proposed Development being separated across the two phases is to maximise potential of the separate life cycles for both current operational windfarm developments. This approach was discussed with the ECU and

other consultees such as SEPA and NatureScot, with methodologies for the impact assessments being produced and agreed prior to assessment. It was noted that the worst-case scenario in EIA terms may differ between disciplines with which period of the proposed Development this scenario would take place. This is due to the interaction with the new larger turbines and the current smaller operational turbines present. The period in which this worst-case scenario takes place will be discussed in each chapter where relevant and would be the primary assessment point for each environmental topic.

55. The distribution of turbine sizes for each phase is as follows:

Table 6.2 – Distribution of proposed turbines through phases

Turbine Height	Phase 1 (T1-T15)	Phase 2 (T16-T23)
150 m	6	1
180 m	7	2
200 m	2	5
Total	15	8

6.3. Site Layout

56. The proposed layout developed, following consideration of environmental, engineering and planning constraints (**Chapter 4: Site Selection and Design Evolution**), is illustrated in **Figure 5.1**.

57. The figure illustrates the proposed Development will comprise:

- The turbines and ancillary infrastructure:
- Turbine foundations and hardstanding's;
- External transformer housing;
- Crane pads;
- Access tracks (circa 21 km new and 7 km upgraded);
- Underground electricity cables;
- Temporary borrow pits;
- Temporary construction and storage compounds with ancillary infrastructure;
- Site signage and snow poles;
- Onsite substation, storage building and control building; and
- Waste water and drainage attenuation measures (as required).

58. The operational lifespan of the proposed Development would be 40 years.

59. Micrositing of 50 m is proposed to facilitate minimisation of the impact of the proposed infrastructure on the local environment. The extent of the micrositing will be determined

following detailed ground investigation and ground clearance with a record of the exact turbine and infrastructure locations being submitted to Local Planning Authority (LPA), via an appropriately worded planning condition. **Table 6.3** details the centre point coordinates for each of the proposed turbines.

Table 6.3 – Turbine Coordinates

Turbine	Easting	Northing
T1	267299	610340
T2	266898	610678
T3	266400	610307
T4	266737	609943
T5	267351	609887
T6	264968	610589
T7	264500	609964
T8	264822	609655
T9	265107	608209
T10	266181	606783
T11	265656	605822
T12	266503	605539
T13	266806	606088
T14	267451	607244
T15	268025	607750
T16	265771	609567
T17	266368	609453
T18	265466	608824
T19	266613	608924
T20	266440	608388
T21	267212	608646
T22	266157	607818
T23	266952	608114

60. The total land take of the proposed Development, after completion of reinstatement measures including: foundations crane pads; site tracks; and new sections of access track, has been assessed to be approximately 13.6 ha excluding batter slopes.

7. EIA Assessments

7.1. Summary of Environmental Effects

61. The following section outlines the potential environmental effects of the proposed Development. In summary, the EIA assessments show that through careful and iterative design of the proposed Development, through site-specific mitigation measures the use of good practice methods during construction there would be no significant environmental effects, with the exception of some localised significant landscape and visual effects.

7.2. Landscape and Visual Impact

62. The landscape and visual aspects have been one of the key components considered throughout the design iterations of the proposed Development. Through the layout of the proposed Development the impacts on landscape and visual have been minimised.

63. During the construction of the proposed Development phases, the area would become active with the presence of vehicles completing deconstruction and construction activities. The deconstruction would be associated with the removal of the existing turbines and redundant sections of track and infrastructure and construction would be relating to new areas of track, the erection of the new turbines and associated infrastructure. The effects of construction are short term and reversible, in that they would cease after each construction phase and the operational effects would take over. It is predicted that during Phase 1 the effects of construction on the proposed Development would be **'Not-Significant' ('Minor')** and the Phase 2 effects would be judged to be **'Not-Significant' ('Negligible').** Overall the effect of construction works on the proposed Development Site would constitute '**Not-Significant'** effects.

64. The decommissioning of the proposed Development would involve similar activity to what would be seen during construction, but solely for the removal of turbines and the reinstatement of ground level features. During this phase the magnitude of change would be high initially but decreasing as works progress, to **'Negligible'** once the restoration of site is complete. Overall the effects during decommissioning on the Site and its landscape fabric would be **'Not-Significant' ('Minor')** reducing to **'Not-Significant' ('Negligible')** upon completion of the short-term works.

65. Of the receptors assessed within this Chapter, four were identified as having **'Likely' 'Significant'** effects as follows:

- A76 and the railway (with parallel minor roads): for Phase 1 (both cumulative scenarios considered), and the full proposed Development but not for Phase 2: south of Cumnock to west of Kirkconnel within 10km of the Site and extending for

approximately 18 km; and from the railway within the corridor between New Cumnock and Kirkconnel within 4 km of the site and extending for approximately 10 km;

- Blackcraig Hill: for Phase 1 (both cumulative scenarios considered), and the full proposed Development but not for Phase 2;
- The local path from Blackcraig – Quintin Knowe – Kello Water valley across and within 2 km of the site: all phases/scenarios considered; and
- Core paths C11 and C12 to the west of New Cumnock approximately 4.5 km from the site: for Phase 1 with existing baseline and the full proposed Development, but not in the consented scenario or for Phase 2;

66. When considering the cumulative aspect of the proposed Development, there is consideration of different potential cumulative scenarios including existing, consented and developments still in planning. Particular consideration was given to Sanquhar II (in construction) as it would introduce large turbines close to the Site and extending to the southeast, and would be of a similar size to the turbines proposed. Lethans, its Extension and Glenmuckloch (both consented) would introduce turbines on the north side of Nithsdale. Sandy Knowe Extension would introduce additional turbines between the proposed Development and receptors in parts of Nithsdale around Kirkconnel and Sanquhar.

67. Future scenarios involve windfarms that have larger turbines than the current HHW. The trend therefore is for larger turbines. Sanquhar II would have turbines of 200 m close to the proposed Development site, and as can be seen from the assessment of visual receptors and viewpoints, the proposed Development would relate to it in terms of turbine size from many locations.

68. The proposed Development, as a repowering exercise, does not alter the geographical pattern of wind energy development in the study area. The southern turbines extend the proposed Development but do not alter the pattern of wind energy development. The larger turbines, as noted above, follow a trend of increasing turbine size, and do not alter the pattern of wind energy development in the study area (extending upwards).

69. Regarding aviation lighting, it has been assumed for assessment as 'worst case' that all of the turbines of the proposed Development would be lit with a 2000 cd steady red light on the hub which would be reduced to 200 cd in clear conditions where visibility extends beyond 5 km. As a result of aviation lighting, **'No Significant'** effects would occur. During times of poor weather conditions, when visibility is reduced to 5 km, the lights would be operated at 2000 cd. Readily accessible viewpoints within 5 km tend to be at notably lower elevation than the Site, with strong downward mitigation of brightness because of the use of a horizontal beam light design. At all locations there would be **'No Significant'** effects as a result of aviation lighting during times of lower visibility.

70. **'Significant'** effects would occur within approximately 10 km of the proposed Development, from Nithsdale, Glen Afton, and from the immediate surroundings of the site such as from Blackcraig Hill. These effects relate to the increased size in turbines, which would be larger relative to hill horizons than the existing HH and HHE turbines and would be more prominent as features on the hills from within Nithsdale and the smaller scale valley of Glen Afton.

7.3. Ecology and Biodiversity

71. The Ecology and Biodiversity Chapter assesses the potential effects the proposed Development may have on ecological receptors including habitats and protected species such as mammals and fish.

72. The Chapter provides details on the baseline ecological conditions within the application boundary and the immediate surrounding environment. The conditions are established through field surveys. In addition, a desk based review was undertaken to obtain relevant ecological data. The identified habitats and species comprising the ecological baseline are described and assessed using recognised criteria in accordance with industry guidelines.

73. A single designated site with an ecological interest (habitat or non-avian species) is located within 5 km (approximately 2 km) of the proposed Development boundary: Muirkirk Uplands SSSI. The Muirkirk Uplands SSSI is designated for blanket bog habitat. No other relevant statutory designated sites are located within 10 km of the application boundary. There are six non-statutory sites within 2 km of the application boundary, all of which are Local Nature Conservation Sites (LNCS). Of these, only Afton Uplands LNCS lies within or adjacent to the application boundary. However, Glen Afton LNCS, Mansfield/Garclaugh/Garepool Burns LNCS and Nith Floodplain LNCS are hydrologically linked to the proposed Development.

74. Habitats identified are similar to those previously noted as being present at the proposed Development. These are primarily degraded blanket bog, upland acid grassland and coniferous woodland. Although areas of blanket bog and degraded bog will be lost to the proposed Development, the layout had avoided bog habitats where possible, taking into account other constraints. As such, areas of the highest quality bog habitat at the proposed Development have been avoided as part of the design process. Without additional mitigation it is considered that impacts associated with loss of blanket bog and degraded blanket bog at the proposed Development will be **'Minor Negative'** resulting in an effect which is **'Not-Significant'.** No impacts are anticipated to blanket bog and degraded blanket bog habitats during operation.

75. An Outline Environmental Management Plan (EMP) for the proposed Development will be provided, subject to consultation with the landowner, NatureScot, EAC and DGC.

76. The main aim of the outline EMP will be to improve and restore areas of blanket bog and degraded bog within the application boundary.

77. As described in the Ecology and Biodiversity Chapter, much of the bog habitat within the application boundary has experienced extensive drainage and so has potential for peatland restoration. The restoration will provide compensation to degraded bog habitat on a 1:10 ratio for the habitats directly lost, and a 1:9 ratio of restoration for the areas undergoing a permanent change (i.e. dry modified bog habitat within 30 m of infrastructure), as per NatureScot guidance (NatureScot, 2023).

78. Restoration will focus on drain blocking to rewet drained areas of peatland as well as peat hag reprofiling and surface bunding. The most appropriate methods to be used are dependent on a number of factors, including peat depth, topography, and extent of

degradation/modification. It is proposed that specific methods to be employed will be decided and agreed with consultees post-consent, as part of the planning condition discharge. Approximately 160 ha within the site has been identified as suitable for peatland restoration, contributing to the required 497.71 ha of compensation and enhancement of bog habitat. The remaining 337.11 ha of required bog habitat compensation and enhancement will be located outside of the application boundary, options for which are discussed within the Outline HMP.

79. A monitoring regime will be included as part of this plan in order to assess the effectiveness of management measures implemented as part of the EMP.

80. Protected species will have Species Protection Plan (SPP) produced as part of the Decommissioning and Construction Environmental Management Plan and agreed by consultees prior to the commencement of development. Good practice measures will be taken into account to prevent accidental mortality of protected species during construction.

81. The habitat around the proposed turbines are considered to be low quality for roosting bats. Pre-construction surveys of locations with the potential for bat roosts will be carried out on any trees or structures with potential support for roosting bats within 30 m of working areas, as part of the SPP. The loss of Habitat to the proposed Development will not significantly reduce the foraging opportunities available to bat species. The implementation of lighting mitigation included in the SPP would mean that disruption caused by construction works will be minimised. The likelihood of significant effects of displacement or disturbance to foraging or commuting bats during construction is considered **'Negligible'**.

82. Bats are considered to be of local nature conservation importance and after application of embedded mitigation the likely effect of displacement or disturbance to bats during construction is considered to be **'Negligible'** and **'Not-Significant'**.

7.4. Ornithology

83. The Ornithology Chapter assesses the effects on ornithological receptors caused by the proposed Development. Alongside **Chapter 7: Ecology and Biodiversity** the assessment of effects on biodiversity is complete. The assessment uses both data from desktop assessment and surveys undertaken between April 2022 and August 2024.

84. There are two statutory designated sites with ornithological interests identified as relevant to the proposed Development. One being the North Lowther and Muirkirk Uplands SSSI and SPA around 4 km away from the proposed Development. The other is the Ailsa Craig SPA which is 76 km from the proposed Development. The Ailsa Craig SPA was scoped out of the assessment upon consultation with NatureScot.

85. Upon assessment of the distribution, abundance and frequency of occurrence of target species recorded, Golden Plover and Red Kite were the only species to be taken forward for assessment.

86. During the construction phases of the proposed Development there is predicted to be **'Likely'**, **'Minor Adverse'**, temporary effects on both Golden Plover and Red Kite through disturbance. However, this is considered as **'Not-Significant'**. When considering

cumulative effects with the proposed Development and other nearby developments the effects are still predicted to be **'Not-Significant'**.

87. During the operational phase of the proposed Development, there are **'Minor Adverse'** effects predicted for both Golden Plover and Red Kite. None of these effects were considered to be significant. For cumulative effects posed by the proposed Development, there were no significant effects predicted.

88. The effects from the decommissioning are predicted to be similar to the effects related to the construction phase. Good practice measures would be implemented to be relative to the best practice at the time. Therefore, decommissioning effects were not considered further.

89. The proposed Development layout is the first step in mitigating the disturbance on ornithology by avoiding designated sites and priority habitats, wherever possible. SPPs will also be agreed with NatureScot and will include bird protection plans which include measures to reduce the effects to sensitive species.

7.5. Hydrology, Geology and Hydrogeology

90. The Hydrology, Hydrogeology and Geology Chapter assesses the potential impact on these topics during the construction and operational phases. The information used for the assessment was compiled from both field survey and desk top reviews with the impact assessment considering the sensitivity of receptors identified through the baseline study against the potential magnitude of effect and the likelihood of it occurring. The effect of mitigation incorporated as part of the design would be taken into consideration when assessing these effects.

91. The proposed Development is not situated within any designated flood plains, there are small pockets of pluvial flooding potential within the Site but there are limited to areas close to watercourses or flatter land.

92. There have been several peat depth probing surveys across the proposed Development from 100 m grid to detailed infrastructure probing on the final design. Through this peat slide risk assessments and management plans have been submitted in support of the application to provide more details on this resource and how best to protect it.

93. 14 Private Water Supplies (PWS) were identified within 3 km of the proposed Development, eight of which were screened out of assessment for reasons such as their catchment area lying outside that of the proposed Development. It is predicted that two of the properties were at medium risk of effects caused by the proposed Development.

94. A total of 91 potential habitats were assessed to have the potential of moderate to high groundwater dependency within the proposed Development Site, however, upon further assessment all of these were determined to not be groundwater dependent and more likely fed through precipitation or groundwater effects.

95. Overall, through the design of the proposed Development and the inclusion of embedded mitigation it is predicted that there would be **'No Significant'** effects on the hydrology, hydrogeology or geology arising from the proposed Development.

7.6. Cultural Heritage and Archaeology

96. The Cultural Heritage and Archaeology Assessment Chapter considers the effect that the potential physical impacts may cause on heritage assets and also the impacts on the setting of these assets regarding their cultural significance. The Chapter objectives are to:

    - Identify the cultural heritage baseline within and in the vicinity of the proposed Development;
    - Consider the proposed Development in terms of its archaeological potential;
    - Appraise the effects of the construction and operation (including cumulative effects) of the proposed Development on the cultural heritage resource; and
    - Propose measures, where appropriate, to mitigate any predicted significant adverse effects.

97. Each of the identified heritage assets are assessed on the direct, indirect and cumulative impacts that may arise due to the proposed Development.

98. The assessment is split into two survey areas, the Inner and Outer Study area, the inner is designed by the red line boundary used for the planning application boundary and the outer extends 10 km from the outermost turbine in that direction.

99. During construction, the adoption of mitigation measures set out above will avoid, minimise, or offset the loss of any archaeological and/or cultural heritage remains that may occur as a result of the construction of the proposed Development. Taking this proposed mitigation into account, any residual effects arising from the construction of the proposed Development in relation on heritage assets would be of no more than **Negligible** magnitude.

100. During its operational lifetime, the residual effects of the proposed Development on the settings of heritage assets would be the same as the predicted effects. All predicted impacts affecting the settings of heritage assets in the Outer Study Area would give rise to residual effects of no greater than **Minor** significance (not significant in EIA terms).

7.7. Traffic and Transport

101. The Traffic and Transport Chapter considers the impact and potential effects as a result of the construction of the proposed Development.

102. There would be a temporary increase in traffic volumes during the construction phases of the proposed Development which would mainly affect the A76. Outside the peak construction phases there would likely be a decrease in the volume of traffic.

103. The maximum traffic is predicted to be in month 8 for Phase 1 with 64 Heavy Goods Vehicle (HGV) movements a day and months 8-10 for Phase 2 with 34 HGV movements a day.

104. The cumulative assessment determined that currently there would be no development that would likely lead to a rise in these effects.

105. There are a range in mitigation measures that have been proposed which would include a Construction Traffic Management Plan and Abnormal Load Management Plan, both of which would be agreed with the LPAs and Transport Scotland.

106. The assessment of potential effects using Institute of Sustainability and Environmental Professionals (ISEP formerly IEMA) guidelines was undertaken. Through the implementation of mitigation measures the residual effect of increased traffic would be at worst a **'Minor'** effect and therefore **'Not Significant'**.

7.8. Aviation

107. The potential impacts of wind turbines on aviation interests have been widely publicised and are outlined below:

- Physical obstruction: Turbines can present a physical obstruction at, or close to, an aerodrome or other aviation activity site such as a military low flying area;
- Primary Surveillance Radar (PSR): Turbines can produce spurious/false returns known as "clutter". Turbine clutter appearing on a radar display can affect the safe and efficient provision of Air Traffic Services (ATS) as it can mask unidentified aircraft from the air traffic controller and/or prevent them from accurately identifying aircraft under their control and/or cause the track of the aircraft under control to be incorrectly reported. In some cases, radar reflections from the turbines can affect the performance of the radar itself;
- Secondary Surveillance Radar (SSR): Turbine towers can obstruct and diffract SSR signals, but these effects are typically only considered when turbines are within 10 kilometres (km) of the facility. At greater ranges, SSR signals reflected from wind turbines can result in the radar generating a false target in a direction that is different to where the intended aircraft target is. Guidance on safeguarding distances varies with the Civil Aviation Authority (CAA) recommending 10 km and NATS recommending 28 km (15 nautical miles (nm)); and
- turbines can cause adverse effects on the overall performance of other Communication, Navigation and Surveillance (CNS) equipment.

108. The assessment comprised a desk-based review of the location, technical characteristics and operational activities of aviation interests and operations in the vicinity of the Site using relevant data sources. The effects of the proposed Development have been assessed by modelling whether any of the proposed wind turbines would be in the line of sight of any aviation radar facilities, and whether the Site is in an area of operational importance to those radars. Evaluation of these effects also considered the response of aviation stakeholders to pre-application consultation.

109. In considering the spatial coverage of the aviation study area, the overriding factor is the potential for turbines to have an impact on civil and military PSRs, taking into account required radar operational ranges. In general, PSRs installed at civil and military airfields have an operational range of between 40 nm and 60 nm. All radar equipped airfields within 60 nm (111 km) of the proposed Development are therefore included in the study area. Enroute radars operated by NATS (En Route) (NERL), and military Air Defence (AD)

radars are required to provide coverage at ranges in excess of 60 nm and so all such radars with potential Radar Line of Sight (RLoS) of the proposed Development turbines are also included in the study area.

110. Before construction were to take place, CAA would be informed of details of turbine height and locations to create obstacle data for inclusion on civil and military aeronautical charts.

111. The proposed Development would require suitable visible and infra-red aviation lighting to be fitted to turbines. A proposed reduced lighting scheme has been submitted for approval to the CAA.

112. Through agreement with aviation stakeholders on the proposed mitigation methods, there are likely **'No Significant'** effects that would arise from the proposed Development for aviation concerns.

7.9. Noise and Vibration

113. Noise will be emitted by equipment and vehicles used during construction of the proposed Development and by the wind turbines during operation. The level of noise emitted by the sources and the distance from those sources to the receiver locations are the main factors determining levels of noise at receptor locations.

7.9.1. Construction Noise

114. Construction noise has been assessed by a desk-based study of a potential construction programme and by assuming the proposed Development is constructed using standard and common methods. Noise levels have been calculated for receiver locations closest to the areas of work and compared with guideline and baseline values. Construction noise, by its very nature, tends to be temporary and highly variable and therefore much less likely to cause adverse effects. Factors including in particular the restrictions of hours of working have been taken into consideration. It is concluded that noise generated through construction activities would have a minor impact and are considered **not significant** in Environmental Impact Assessment (EIA) terms.

7.9.2. Operational Noise

115. Operational turbines emit noise from the rotating blades as they pass through the air. This noise can sometimes be described as having a regular 'swish'. The amount of noise emitted tends to vary depending on the wind speed. When there is little wind the turbine rotors will turn slowly and produce lower noise levels than during high winds when the turbine reaches its maximum output and maximum rotational speed. Background noise levels at nearby properties will also change with wind speed, increasing in level as wind speeds rise due to wind in trees and around buildings, etc.

116. Noise levels from operation of the turbines have been predicted for those locations around the development area within the application boundary (the Site) most likely to be affected by noise. Noise surveys for adjacent wind energy developments have already sufficiently established existing baseline noise levels at a number of these properties. Noise limits have been derived from data about the existing noise environment following the method stipulated in national planning guidance. Predicted noise levels and the applicable criteria considered take full account of the potential combined effect of the noise from the

proposed Development along with Afton Windfarm (operational), Pencloe Windfarm (consented), Sanqhuar Windfarm (operational), Sanquhar II Windfarm (in construction), Sandy Knowe Windfarm (operational), Sandy Knowe Windfarm Extension (Proposed) and the single wind turbine at High Park Farm (operational). Other, more distant windfarms were not considered as they do not make an acoustically relevant contribution to cumulative noise levels.

117. Predicted operational noise levels have been compared to the limit values to demonstrate that turbines of the type and size which would be installed can operate within the limits so derived. In some instances, the derived criteria were predicted to be exceeded for the first phase of the proposed Development, which could represent a significant effect. However, it was concluded that this could be mitigated through operational restrictions applied to some of the turbines in some wind conditions, resulting in compliant noise levels. In other conditions, and for the second phase of the proposed Development, compliance with the derived criteria was also predicted. It is concluded therefore that operational noise levels from the windfarm can be controlled within levels recommended in national guidance for wind energy schemes and are considered **not significant** in EIA terms.

118. The proposed Development would also include a substation, which would emit a level of noise during operation. Based on experience of similar installations and professional judgement, in conjunction with the large separation distances to the nearest receptor locations, the associated levels of operational noise would be negligible and are considered **not significant** in EIA terms.

7.10. Other Issues

7.10.1. Forestry

119. The Forestry Study Area (FSA) is comprised of privately owned and managed woodlands which extends to 338 ha.

120. As a result of the construction of the proposed Development, there would no loss of woodland area as existing forestry tracks will not be used for turbine delivery and no turbines are positioned within woodland.

7.10.2. Shadow Flicker

121. Shadow flicker can occur under certain combinations of geographical position and time of day. This occurrence takes place when the sun passes behind wind turbine blades towards a residential property. As the blades rotate, a shadow is cast across the window of residential receptors and can lead to the flickering effect. This can only occur within a building, where the flicker appears through an opening, such as a window.

122. Based on the 'realistic' modelled scenario, the shadow flicker assessment predicted the effects of the proposed Development would be **'Not Significant'**.

7.10.3. Carbon Balance

123. During the manufacturing of components for the proposed Development and during the construction and decommissioning of the proposed Development, greenhouse gases

(GHG) would be released. This is particularly prevalent where natural carbon stores, such as areas of peat, are present and potentially impacted by the proposed Development.

124. While the proposed Development is expected to provide savings of GHG over its lifetime, there is the likelihood that there are GHG emissions through;

- Disturbance of peatland; and
- Lifecycle emissions from the production and delivery of turbines and other infrastructure.

125. The assessment of the proposed Development is based upon a detailed baseline description of the proposed Development itself and the locations the infrastructure covers. Calculations and from site-specific data wherever available. Where data is not available site specifically, national and regional information has been used, such as Met Office data for local air temperatures

126. Results from the assessment are in accordance with ISEP's Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emission and Evaluating their Significance (2022). Any project that can lead to the reduction or removal of GHG emissions from the atmosphere provides a beneficial effect will be considered significant.

127. As no adverse effects are predicted and the overall operational lifespan of the proposed Development is predicted to have a net positive influence, no additional mitigation measures are proposed.

128. The overall impact is considered to be **'Significant'** and **'Beneficial'** effect, that would contribute positively to long-term climate change mitigation.

7.10.4. Infrastructure

129. This section describes the existing environment with respect to telecommunications and the potential effects on telecommunication operations from the construction and operation of the proposed Development.

130. Windfarm developments have the potential to cause a variety of effects on telecommunications, as new physical structures can cause interference between any present fixed link paths by blocking and/or reflecting radio signals from telecommunication infrastructure.

131. There are two micropath links within the Site, related to the current HHW. As these are in place to aid in operation of the current windfarms, it is predicted that the proposed Development would have no impact.

132. As there are no further telecommunication links on or within close vicinity to the Site, there would be no residual effects or mitigation required, therefore this topic was not assessed any further.

7.10.5. Utilities – Electricity, Water and Gas

133. This section describes physical utilities that are present within and/or surrounding the Site which may be potentially affected through the introduction of the proposed Development.

7.10.5.1. Overhead Lines

134. There are two separate overhead line connections within the area covered by the Site. These are the connection points for the operational HH and HHE to the grid network.

135. The most northern of these connections, as shown in **Figure 4.3a**, is the connection point for HH and will be removed during phase one of the proposed Development. This connection will be replaced with a new substation on site as shown in **Figure 5.1**.

136. The second connection is for HHE substation and this will remain in place for the proposed Development as a connection point for phase two. A 200 m buffer has been adhered to through the design iteration process.

137. All new grid connection routes are subject to their own EIA and planning application and are not considered within this EIA Report.

7.10.5.2. Private Water Supplies

138. There is a risk of increased sediment erosion as a result of windfarm construction and decommissioning which can have impacts on the quality, quantity and continuity of water supply to properties surrounding the Site.

139. EAC and DGC were consulted regarding the presence of Private Water Supplies (PWS) within a 3 km search area from the Site. Thirteen PWS were identified. **Table 4.11** of **Technical Appendix 9.2: Private Water Supply Risk Assessment** lists the eight PWS that were initially screened out of the assessment and rationale for doing so including, for example, the supply catchment lying outside that of the proposed Development. A further five PWSs were taken forward for individual consultation, via a questionnaire, and risk assessment. **Table 4.2.1 of Technical Appendix 9.2** summarises the PWS details and findings from the questionnaire responses.

140. The Private Water Supply Risk Assessment (PWSRA) identified that Hillend, Nether Waistland Farm and Meikle Westland Farm were at Low risk from the proposed Development, that Blackcraig Farm was at Medium/Low risk from the proposed Development and that Overcairn Farm was at Medium risk from the proposed Development.

141. With the good practice mitigation measures described in **Technical Appendix 9.2** in place, the impact on PWS by the proposed Development is predicted to be N**ot Significant**.

7.10.5.3. Public Water Supplies

142. The Afton Water near to the Site is a heavily modified water body which is used for public drinking water supplies. As described in **Chapter 9**, the proposed Development would have no effect on this public water supply. As there are no other public water supplies within the vicinity of the Site, this topic was not considered any further in this Chapter.

7.10.5.4. Buried Infrastructure and Underground Assets

143. There are underground cables present within the Site, all of which are for the current HHW. Where feasible these will be de-energised and left in situ to minimise

environmental impacts through unnecessary excavation. If deemed necessary to remove, the cable would be excavated and then backfilled.

144. There are no further buried infrastructure or gas network assets within the Site and so this was not considered any further.

7.10.5.5. Conclusions

145. The proposed Development is predicted to have **no significant** impact upon utilities within the Site or the surrounding area.

7.10.6. Public Access

146. There are no core paths across the Site. There is one core path adjacent to the eastern edge of the Site and a 200 m buffer has been applied throughout design iterations to maintain an appropriate distance from turbines and infrastructure. Neither construction nor operational traffic associated with the proposed Development will use this core path. Therefore, this core path is unlikely to be impacted by the proposed Development.

147. There is one Right of Way (RoW) that passes through the central area of the Site. This is shown in **Figure 4.3a: Constraints Overview**. A 200 m buffer has been applied to the RoW to indicate preferable distance based on the topple distance of the tallest turbines. There are currently two turbines and associated infrastructure within the 200 m buffer. During the construction phases of the proposed Development, it is likely that this RoW would require a diversion, due to interaction with the proposed infrastructure construction activities. This could cause inconvenience to regular users of the RoW, however this diversion would be temporary during the construction phase only and of negligible significance. Following construction, the access tracks of the proposed Development would be used to replace some sections of the RoW and would have no long term significant effects.

7.11. Socio-economics, Tourism and Recreation

148. The proposed Development could deliver a total of £48.5 million Gross Value Added (GVA) and 547 years of employment in Scotland during the development and construction phase.

149. Scotland has signed up to ambitious climate change targets, with the Climate Change (Emissions Reductions) Act 2019[1] committing Scotland to the reduction of emissions to net zero by 2045. This commitment to a net zero economy is now central to economic policy. This transformation will require an increase in renewable energy generation, to replace other forms of generation and to facilitate the decarbonisation and electrification of the economy.

150. The development of projects such as the proposed Development offer an opportunity to generate economic impact regionally and nationally while driving the delivery of a more sustainable economy in Scotland.

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[1] *Scottish Government (2019), Climate Change (Emissions Reduction Targets) (Scotland) Act 2019*

151. The proposed Development could deliver a series of economic benefits during the phases of development, construction, and following operations. In particular, it was estimated that during its development and construction, the proposed Development could generate:

- £16.5 million GVA and 174 years of employment in East Ayrshire and Dumfries and Galloway; and
- £48.5 million GVA and 547 years of employment across Scotland.

152. During its operations and maintenance, each year the proposed Development could generate:

- £1.7 million GVA and 10 jobs in East Ayrshire and Dumfries and Galloway; and
- £3.7 million GVA and 29 jobs across Scotland.

153. The proposed Development will also contribute to public finances through the payment of non-domestic rates, which could amount to approximately £1.6 million annually, or £62.4 million over a 40-year operational lifetime. This will support the funding of local public services in the context of challenging public sector finances.

154. To support local ambitions and needs, it has become common practice for onshore wind projects to offer community benefit funding, with Scottish Government guidance suggesting £5,000 per annum per installed Megawatt (MW). This level of funding would generate around £0.7 million every year for the local economy, equivalent to £28 million (not including indexation) over the lifetime of the proposed Development.

155. Over time, research evidence has consistently found that there is no relationship between onshore wind developments and tourism activity in Scotland. In 2021, BiGGAR Economics produced a report analysing the relationship between the construction of onshore windfarms and tourism employment at the local, regional and national level.[2] The report concluded that there was no pattern or evidence suggesting that the development of onshore windfarms in Scotland had any negative effects on the tourism economies of the country as a whole, local authority areas or the immediate areas surrounding windfarms.

156. An assessment has also been undertaken focusing on tourism assets that are located within 15 km of the proposed Development. It found that the windfarm proposals are not expected to affect the local accommodation providers, recreation trails and tourism attractions.

The creation of the proposed Development can make a significant contribution to Scotland's economic strategy, which is now being driven by climate change commitments and deliver a range of local economic and community benefits, without any adverse effects on other aspects of the economy, such as tourism.

[2] *BiGGAR Economics (2021), Wind Farms & Tourism Trends in Scotland: Evidence from 44 Wind Farms*