ScottishPower Renewables

Hare Hill Windfarm Repowering and Extension

Design and Access Statement

November 2025

Table of Contents

Abbreviations

Abbreviation	Description
AIL	Abnormal Indivisible Load
CEMP	Construction Environmental Management Plan
DAS	Design Access Statement
DGC	Dumfries and Galloway Council
DGLDP2	Dumfries and Galloway Local Development Plan 2
EAC	East Ayrshire Council
EACLDP2	East Ayrshire Council Local Development Plan 2
ECU	Energy Consents Unit
EIA	Environmental Impact Assessment
FLS	Forestry and Land Scotland
GWh	Gigawatt Hours
HGV	Heavy Goods Vehicles
LGV	Light Good Vehicles
m	Metres
MW	Megawatts
NGR	National Grid Reference
PAC	Pre-application Consultation Report
PANs	Planning Advice Notes
PIEs	Public Information Events
PPA	Power Performance Assessment
SPR	ScottishPower Renewables (UK) Limited
UK	United Kingdom
ZTV	Zone of Theoretical Visibility

1. Introduction

1. This Design and Access Statement (DAS) has been prepared by Natural Power Consultants Ltd (Natural Power), acting on behalf of ScottishPower Renewables (UK) Limited (SPR) (hereafter 'the Applicant').

2. The Applicant is submitting an application for Hare Hill Windfarm Repowering and Extension (hereafter 'the proposed Development') under Section 36 of the 1989 Electricity Act (Section 36 application). The proposed Development falls within the remit of the 1989 Electricity Act as the installed capacity of the proposed Development, once operational, will be in excess of 50MW. In support of the application, the Applicant has undertaken an Environmental Impact Assessment (EIA) and produced its findings in the EIA Report. The EIA Report informs the readers of the nature of the proposed Development, potential significant environmental effects and measures proposed to protect the environment during site preparation, construction and operation.

3. The application is for consent to construct and operate a windfarm comprising 23 turbines with anticipated capacity of approximately 130MW's. .

4. The Applicant is part of the Iberdrola Group, one of the world's largest integrated utility companies and a world leader in wind energy. The Applicant only produces 100% green electricity with a focus on wind energy, smart grids and driving the change to a cleaner electric future. They are investing over £16 million every working day to make this happen. They are committed to speeding up the transition to cleaner electric transport, improving air quality and, over time, driving down bills to deliver a better future quicker, for everyone.

5. The Design and Access Statement (DAS) is submitted in support of the Section 36 application. The DAS should be reviewed in the context of the EIA Report and in particular **Chapter 5: Development Description** which provides a detailed description of the final layout of the proposed Development.

2. Site Location

6. The proposed Development is located approximately 1.5 kilometres (km) south east of the village of New Cumnock, 4.5 km west of Kirkconnel, north east of the Afton Reservoir and Blackcraig Hill (**Figure 1.1.** The application boundary **(Figure 1.2)** and the area within (the Site) is located within both the East Ayrshire Council and Dumfries and Galloway Council administrative areas.

7. The Site is made up of undulating hills of upland heath and moorland with areas of commercial forestry Regarding the physical attributes of the existing site, there are a number of burns and small watercourses.

8. The current operational site containing Hare Hill (HH) and Hare Hill Extension (HHE), collectively referred to 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 the operational windfarm with HHE turbines extending towards the south east. The boundary to the proposed Development will incorporate both of these areas and extend further to the south east.

9. The access to the proposed Development is from the A76 east of New Cumnock. The access track runs south alongside a block of commercial forestry which then leads east to the first of the HH turbines. The track continues to the east 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. **Note**: an existing track runs through the commercial forestry. This track will not be utilised for abnormal loads. It will be used as required for standard vehicle access during construction, operational access between phases, Hare Hill Extension and in emergencies.

2.1. Proposed Development Overview

10. The proposed Development would comprise turbines, crane hardstandings, a substation, networks of connecting tracks and associated infrastructure. The centre of the Site is at NS 65411 08094. Additionally, the proposed Development would include two areas for habitat improvement with one located onsite and one offsite (location to be determined), full details of these can be found in **Technical Appendix 7.4: Draft Habitat Management Plan**. The proposed Development layout is provided in **Figure 5.1: Proposed Site Layout.**

11. 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).

12. 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.

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

2.1.1. Proposed Development Phasing

14. 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 2.1 - 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									

15. 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.

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

Table 2.2 - 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

2.2. Site Layout

17. 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**.

18. 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).

19. The lifespan of the proposed Development would be 40 years.

20. 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 the relevant Local Planning Authorities (LPA's), via an appropriately worded planning condition. **Table 2.3** details the centre point coordinates for each of the proposed turbines.

Table 2.3 - 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

3. Design Policies

3.1. National Guidance

21. National planning policy of relevance to the Proposed Varied Development is dictated by three key issues:

    - Climate change;
    - A need to reduce reliance on fossil fuels; and
    - The journey to Net Zero.

22. There is a range of national legislation and planning policy which provides targets and guidance of relevance to the development of onshore wind farms. The following have been taken into account as part of the design process:

    - National Planning Framework 4 (NPF4 – adopted February 2023); and
    - Planning, Energy and Climate Change Acts and Policies.

23. NPF4 therefore forms part of the statutory Development Plan. For the purposes of s.36/36C consent decision-making, acknowledging that Section 25 (Status of Development Plan) of the 1997 Act is not engaged, however NPF4, in its approved form, is a significant material consideration in the overall decision-making process.

24. Further details on how the proposed Development has met the policy direction of NPF4 in conjunction with a wider assessment against other national policy guidance/advice and local planning policies is provided in the supporting document – Planning and Renewable Energy Statement

25. The iterative design process applied to the proposed Development carefully considered the context of national advice in respect of design, the development plan and supplementary guidance which is relevant to the proposed Development.

26. The most important national policies relating to the siting and design of the proposed Development are contained within the NPF4, associated Planning Advice Notes (PANs), and the Onshore Wind Turbines: Planning Advice. See **Chapter 2: Legal and Policy Context** of the EIA Report.

27. In relation to the design and layout of windfarms, NPF4 sets out the basis for a spatial framework in which developments seek to protect, restore and enhance natural assets.

28. Policy 11 of the NPF4 sets out the spatial framework within which windfarms are assessed and is based on the following overreaching policy direction:

    - development proposal for winds farms in National Parks and National Scenic Areas will not be supported;
    - 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;

- development proposals that impact on international or national designations will be assessed in relation to Policy 4; and
- project design and mitigation will demonstrate how the following impacts are addressed:
  - Impacts on communities and individual dwellings, including, residential amenity, visual impact, noise and shadow flicker;
  - 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.
  - public access, including impact on long distance walking and cycling routes and scenic routes;
  - impacts on aviation and defence interests including seismological recording;
  - impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;
  - impacts on road traffic and on adjacent trunk roads, including during construction;
  - impacts on historic environment;
  - effects on hydrology, the water environment and flood risk;
  - biodiversity including impacts on birds;
  - impacts on trees, woods and forests;
  - proposals for the decommissioning of developments, including ancillary infrastructure, and site restoration;
  - the quality of site restoration plans including the measures in place to safeguard or guarantee availability of finances to effectively implement those plans; and
  - cumulative impacts.
  - In considering these impacts, significant weight will be placed on the contribution of the proposal to renewable energy generation targets and on greenhouse gas emissions reduction targets.

29. Schedule 9 of the The Construction (Design and Management) Regulations 2015 provides legal design requirements that needed to be considered whilst preparing the design of the Proposed development. The general principles of prevention and any pre-construction information to eliminate, so far as is reasonably practicable, foreseeable risks to the health or safety of any person

    a) carrying out or liable to be affected by construction work;

    b) maintaining or cleaning a structure; or

c) using a structure designed as a workplace were taken into account during design of the Proposed development.

30. Where it was not possible to eliminate these risks, the designer, so far as is reasonably practicable took steps to reduce or control the risks through the subsequent design process.

31. The Onshore Wind Turbines: Planning Advice, published by the Scottish Government in 2014 provides an overview of common issues which need to be considered and some guidance on how to assess these in order to inform onshore wind design. The advice relating to onshore wind design, such as landscape assessment, shadow flicker analysis, noise potential impacts on wildlife and more has been incorporated into the design of the Proposed development.

32. The Onshore Wind: Policy Statement, published by the Scottish Government in 2022 also provides a high level overview of topics to be considered during onshore wind design. Considerations highlighted in Chapters 3: Environmental Considerations: Achieving Balance and Maximising Benefits; 4: Benefits to Local Communities and Financial Mechanisms; 6: Onshore Wind and Aviation Considerations; and 7: Onshore Wind and Technical Considerations have been taken into account during the design process of the Proposed development.

3.2. Local Development Plan

33. The current Local Development Plan (LDP) for the Site comprises:

- Dumfries and Galloway Local Development Plan (DGLDP2) (Dumfries and Galloway Council, 2019)
- The East Ayrshire Local Development Plan 2 (EALDP2) 2024;

34. The DGLDP2 was adopted on 3 October 2019 and provides a planning policy direction for the future developments within Dumfries and Galloway Council. The policy contained in the DGLDP2, in respect of renewable energy, is therefore considered to be relevant, noting that the weight to be attached to it is reduced as it pre-dates NPF4.

35. The framework gives guidance for future developments within Dumfries and Galloway over the next ten years while outlining the potential development opportunities available. The Councils 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.”

36. 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 Development. The policies being IN1: Renewable Energy and IN2: Wind Energy.

37. 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 Section 36 application.

38. EALDP2 was adopted in April 2024. The policy contained in the EALDP2, in respect of renewable energy, is therefore considered to be relevant, noting that all LDP's adopted after February 2023 should adopt a policy direction that complies with NPF4.

39. The EALDP2 provides guidance on how East Ayrshire should be developed over the next 10-20 years.

40. A full assessment of EALDP2 in included in the **Planning and Renewable Energy Statement** submitted in support of this Section 36 application.

4. Design Principles

41. This DAS discusses the key design issues and constraints relevant to the proposed Development and the way they have been addressed in the layout and design. **Figure 4.3a: Site Constraints Overview** shows a heatmap of the Site Constraints.

4.1. Wind Turbine Scale

42. Taller turbines produce more electricity, as with height both wind speed and yield increase. Bigger rotors also capture wind more efficiently and produce more electricity per turbine.

43. The wind turbines selected for the proposed Development would each have a rating of between 4.5 MW to 6.2 MW based on wind turbine technology which is currently available and would have a maximum height of 200 m and a minimum of 150 m to tip height. This would maximise the contribution that the proposed Development could make towards the Scottish Government's net-zero and associated renewable energy targets.

44. The necessity for taller turbines is recognised in the Scottish Government's Onshore Wind Policy Statement (December 2022) which asks for the integration of onshore wind development in forested areas which can only be possible if taller, more efficient turbines are installed.

45. As demonstrated in **Chapter 6: Landscape and Visual Assessment** of the EIA Report, it is considered that the landscape character of the Site can accommodate taller turbines. In addition to optimising the overall yield of the proposed Development, the use of taller turbines translates into the proposed Development requiring a fewer number of turbines when compared to the infrastructure on HHW. The utilisation of taller turbines also helps minimising tree felling by increasing the rotor clearance above the tree canopy, therefore reducing the impact of existing forestry operations.

46. Furthermore, the supply of smaller wind turbines across Europe is already reducing, due to the lack of demand as manufacturers are recognising the world market is shifting to larger/taller machines and development research is focussed on larger turbines securing higher yield. The onshore wind industry is experiencing a significant reduction in supply of smaller wind turbines and therefore it is unlikely that a range of smaller turbines (e.g. 150

m) would be available at competitive prices by the time the proposed Development would be constructed.

47. The final selection of the turbine tip height of up to 200 m was considered to represent the best balance in terms of energy yield, landscape fit and the scale of the turbine that is currently capable of being transported to the Site.

4.2. Wind Analysis

48. Wind analysis and wake modelling has been carried out by the Applicant to identify the areas of the Site most likely to produce the highest yields and therefore the best generational output.

49. For turbines to work as effectively as possible, they must be suitably spaced relative to the predominant wind direction. If they are too close together in this direction, the wake effects from the wind turbines located on the upwind edge of the array would create turbulent air for the next row and so on through the array, reducing the overall energy output. Instead, when turbines are located too far apart the opportunity to increase capacity is reduced.

50. There is no industry standard for spacing, only manufacturer recommendations and rule of thumb. Six times rotor diameter in the predominant wind direction and four times rotor diameter (RD) cross wind (6 RD X 4 RD) is a common starting point. This is understood to provide a reasonable compromise between turbine proximity and site capacity without unduly compromising turbine operation.

4.3. Landscape Character and Visual Amenity

51. The design of the wind turbine layout is a vital part of the landscape and visibility effects of a wind farm. Its appearance considered on its own in the context of the surrounding landscape and cumulatively were important considerations. Landscape and visual input to the design was informed by NatureScot pre-application guidance for onshore wind farms. Online version dated November 2024, experience and drawing on fieldwork observations. In addition to those general design principles, the following key landscape and visual sensitivities were identified as key factors for consideration in the design:

    - minimise prominence of the proposed Development in views from the East Ayrshire Uplands, Ayrshire Upland River Valleys, Blackcraig Hill and core paths at Knockshinnoch Lagoons and New Cumnock Circular;
    - reduce the prominence of the proposed Development in views from nearest residents and settlement including the village of New Cumnock and recreational users in the area;
    - consider the impacts with nearby cumulative developments including, Sanquhar II (consented). Lethans, its Extension and Glenmuckloch (both consented) and Sandy Knowe Extension;
    - reduce the prominence of the proposed Development in views from key transport routes including the A76; and

- avoid significant impacts upon most valued landscape features on the Site and seek enhancements where possible.

52. The final proposed Development layout has considered the following:

    - reasonably consistent and balanced relationship when seen from the surrounding area, particularly when seen in views from the village of New Cumnock;
    - non-significant effects on visual amenity for nearby settlements, as well as most dispersed properties in proximity to the Site; and
    - Where possible, proposed excavation for access tracks and other infrastructure has been minimised and the location of the substation and construction compound have been reviewed, and the selected option has been chosen in order to minimise visual effects.

53. The landscape and visual effects of the proposed Development are addressed further in **Chapter 6: Section 6.13** details the key landscape and visual design principles that were adopted during design evolution to mitigate against impacts on the key sensitive receptors above.

4.4. Ecology and Ornithology

54. Ecological surveys have been carried out across the Site since 2022, including a UK habitats survey, a National Vegetation Classification (NVC) survey and protected species surveys (including bats, pine marten, badger, otter, water vole, red squirrel and fish). Sensitive ecological features, including habitats present within the Site and species which use the Site and appropriate buffers, have been avoided as far as possible. The proposed Development avoids ecological features of greatest sensitivity. In addition, the recommended habitat standoff distances from blade swept path to key habitat features have been incorporated into the design to reduce collision risk to bats.

55. Ornithology surveys have been carried out across the Site and surrounding area over a 24-month period between April 2022 and August 2024, including:

    - vantage point watches;
    - scarce breeding birds (for raptors, divers and any other species listed in Schedule 1 of the Wildlife and Countryside Act 1981); and
    - winter walkovers for non-breeding birds.

56. Suitable buffers were considered during the design evolution process and areas have been specifically avoided to minimise the impact on sensitive species.

57. The ecology and ornithology effects of the proposed Development are addressed further in **Chapter 7: Ecology and Biodiversity**, and **Chapter 8: Ornithology**.

4.5. Hydrology and Hydrogeology

58. In accordance with good industry practice, a 50 m buffer zone has been applied around all watercourses for the location of the proposed wind turbines. This buffer reduces the risk of runoff, loose sediment and potential pollutants entering watercourses. In some

cases, the use of existing tracks, already within 50 m of drainage ditches, have been identified as the best option for design as repurposing existing tracks will minimise the need for new tracks. In selected locations, a balance of constraints has necessitated use of a narrower buffer zone. Watercourse crossings have been minimised as far as practicable; and where possible, existing crossings would be used. Existing crossings may be upgraded or replaced as appropriate to accommodate the scale of the proposed infrastructure.

59. Data on private water supplies (PWS) within 3km of the Site were obtained from EAC, DGC and SEPA. No PWS are present within the Site and 5 PWS were identified for further investigation. PWS were assessed as a medium to low risk constraint to development.

60. Areas with potential to be Groundwater Dependent Terrestrial Ecosystems (GWDTE) were also examined. Several areas of GWDTE were identified within the Application Boundary. All potential GWDTE were considered to be sensitive and have been avoided as far as practicable by careful design.

61. The hydrology and hydrogeology effects of the proposed Development are addressed further in **Chapter 9: Hydrology, Hydrogeology and Geology**.

4.6. Peat Depth

62. The majority of the Site is underlain by peaty/mineral soils;

63. Site visits have confirmed the presence of peat (**Chapter 9**) and peatland habitats. Peat probing and habitat surveys were undertaken between May 2024 and March 2025 and show that the peat is of shallow depths and of variable condition across the Site. The peat probing data is discussed in **Technical Appendices 7.5, 9.2 and 9.6.**

64. A review of the peat depth data and habitat mapping, in conjunction with slope gradients, allowed areas of deep peat (typically greater than 1.5 m) and those areas of less modified peat to be avoided where possible through the evolution of the design. Where possible, proposed wind turbines and site infrastructure would be located within areas with no peat or with peat less than 1.0 m deep. Where new access tracks cannot avoid areas of deep peat, floating tracks have been incorporated into the design.

65. The proposed Development has also been designed to avoid any areas which may be subject to peat slide risk. The ground condition constraints that were considered in the design of the proposed Development were:

    - identification of peat depths in excess of 1.5 m - to minimise incursion, protect from physical damage, minimise excavation and transportation of peat, reduce potential for peat instability and minimise potential soil carbon loss;
    - identification of slope angles greater than 5° - to minimise soil loss and potential instability; and
    - avoidance of areas where initial peat stability concern was identified where possible – to avoid areas with possible instability issues and associated indirect effects on surface water.

4.7. Archaeology and Cultural Heritage

66. Archaeology and cultural heritage constraints were identified at an early stage of the design process, with inner and outer study areas identified around the site boundary in order to establish what assets could be avoided during the design process.

67. The buffers and interpretation of heritage assets' importance/sensitivity were further refined during the course of the design and EIA process. In particular the importance/sensitivity was informed by archaeological site visits undertaken to establish the quality of the preservation of the remains within the Site.

68. Through the EIA scoping process and subsequently, the EIA team engaged with key heritage consultees such as Historic Environment Scotland to agree a basis for the assessment. Key messages arising from the consultations undertaken were fed back to the design team so that amendments could be made to address the feedback were possible.

69. The archaeological and cultural heritage effects of the proposed Development are addressed further in **Chapter 10: Archaeology and Cultural Heritage**.

4.8. Noise

70. For the purposes of early constraints mapping, avoidance buffers of 1 km were applied to inhabited residential properties in the vicinity of the turbine area. These buffers were refined further during the design process based on expert noise advice in order to reduce the risk of impacts on inhabited residential receptors.

71. An initial review of the baseline data surveyed for other windfarm schemes, and which are publicly available in the assessments for those schemes, suggests that existing baseline levels have been sufficiently defined for the purposes of an assessment of operational noise in accordance with ETSU-R-97 and best practice. Noise modelling was undertaken using this data for the proposed turbine layout at various stages of the design process, to predict the likely sound level which would result from the proposed Development at nearby residential properties.

72. The difference between measured background noise levels and predicted noise levels needs to be compliant with ETSU-R-97: 'The Assessment and Rating of Noise from Wind Farms' (Department for Trade and Industry (DTI), 1996) to avoid a significant impact. Applying design criteria in accordance with ETSU guidance ensures that no exceedances of acceptable noise levels would occur for the proposed Development.

73. The noise effects of the proposed Development are addressed further in **Chapter 13: Noise and Vibration**

4.9. Telecommunications

74. There are two micropath links within the Site, related to the current operational Hare Hill and Hare Hill Extension windfarms. As these links are in place to aid in operation of the HHW, which would be decommissioned in phases, it is concluded that the proposed Development will have no impact.

75. As there are no further telecommunication link on or within close vicinity to the Site, this topic was not assessed any further.

4.10. Shadow Flicker

76. Avoidance buffers of 1 km were applied to inhabited residential properties in the vicinity of the turbine area. This also served to reduce the frequency and likelihood of shadow flicker effects being encountered by residents.

77. Further information on shadow flicker effects can be found in **Chapter 14: Other Issues.**

4.11. Cumulative Assessment

78. In order to inform the cumulative impact assessment, cumulative Zones of Theoretical Visibility (ZTVs) were produced for all windfarms within 45 km of the proposed Development to identify the windfarms to which the proposed Development could cause significant cumulative impacts. It was then decided which win farms should be take forward to the detailed cumulative assessment.

79. The cumulative impacts of the proposed Development are considered within the induvial subject Chapters where relevant.

5. Consultation and Scoping

80. Consultation was undertaken as part of the EIA process to seek a comprehensive understanding of the requirements and views of the consultees. Consultation comprised two rounds of public consultation in the form of Public Information Days (PIDs) undertaken in April 2024 and September 2024. Further information on the consultation process and how this has helped shape the proposed Development can be found in the **Pre-Application Consultation Report**, submitted in support of this application.

81. An EIA Scoping Report was submitted to the Energy Consents Unit (ECU) in November 2023 to accompany a request for the Scottish Ministers to adopt a Scoping Opinion under Regulation 15 of the EIA Regulations 2017. The Scoping opinion was received from the ECU in April 2024. A copy of the Scoping Opinion is provided in **Technical Appendix 3.2**. The Scoping Opinion is detailed in the consultation tables within the EIA Report **Chapters 6 to 15**, with reference on how the comments have been addressed.

6. Design Evolution

6.1. Consideration of Alternatives

82. The proposed Development has gone through four principal iterations of the layout (the layout presented at scoping and three subsequent iterations), which have been developed at different stages in the project design process. Layouts A to D, shown on **Figure 4.2b**, illustrate the four layouts and visually illustrates how the design has evolved through the design stages of the EIA process. A summary of the evolving layouts and design and the reasons for the changes are presented in **Table 6.1** below.

Table 6.1 Description of Turbine Area Design Evolution Stages

Layout	Number of Turbines	Tip height (m)	Comments
Layout A: Scoping Layout	27	250	A feasibility study was undertaken in 2022 and was further revised leading into the scoping process. This layout formed the basis of the EIA Scoping Report submitted in March 2023.
Layout B: Design Workshop Layout	26	150-200	Due to aviation constraints the turbines within this design were highlighted for height reduction between the range of 150-200. This was also informed by environment constraints data and wind turbine parameters instructed by the Applicant.
Layout C: Chilled Layout	25	150-200	A 25 turbine layout of up to 200 m to tip, responding to field data collated for the Site up to September 2024, scoping and public consultation responses, alongside further advanced onsite environmental surveys and visual analysis
Layout D: Frozen Layout	23	150-200	The final proposed Development layout derived of 23 turbines of up to 200 m to tip. This was informed by detailed multidisciplinary assessment, and including locations of ancillary infrastructure. New access track, avoiding forestry, was included as no agreement achieved on using existing track for abnormal loads/turbine delivery.

6.2. Design Iterations

Layout A: Scoping Layout

83. In 2022 a feasibility study was undertaken on behalf of the Applicant which concluded that the Site had a potential to accommodate up to 27 turbines of a tip height of up to 250 m.

84. In 2022, a feasibility study was undertaken on behalf of the Applicant which concluded that the turbine area of the proposed Development had a potential to accommodate up to 27 turbines of a tip heights in the range of 175 m of up to 250 m.

85. Numerous iterations of the design were considered, consisting of a range of turbine heights. The layout at this point was considered optimal from all known constraints at the time of submitting the Scoping Report.

86. This design is shown in **Figure 4.2a**.

Layout B: Design Workshop Layout

87. Following EIA scoping, an initial constraints assessment and updated design was prepared, consideration of candidate turbine design parameters, energy yield, and a variety of environmental assessments undertaken from 2023 through the summer of 2024. The environmental assessments included but were not limited to:

- ornithological and bat surveys;
- ecological habitat surveys;
- phase 1 peat depth probing;
- telecommunications assets; and
- initial consideration of the impacts on the setting of cultural heritage assets in the vicinity of the turbine area.

88. As a result, the proposed layout was amended in June 2024. The main factor considered within this iteration was the constraint from an Instrument Flight Procedure of nearby airports. This removed turbines over a certain height across the site which led to the reduction in height ranges to 150-200 m to tip. Initially, potential locations for up to 27 turbines were identified. Through a process of collaboration and review, the design was refined to 26 turbines as presented in **Figure 4.2b** as Layout B.

Layout C: Chilled Layout

89. A further design session was held in September 2024 with turbine moves based on discussions with relevant consultees, feedback from public consultations, engagement with local community councils and the increase in environmental data provided by surveys.

90. One of the major changes within this iteration was the removal of turbines in the eastern area which significantly removed a large area of land and access routes to the east.

91. Landscape and visual impacts towards the northern ridge of site was also looked at in detail to remove the stacking of turbines and improve the visual impact of site from surrounding key viewpoints.

92. The outcome of the chilled design was a 25 turbine layout, with connecting new and upgraded access tracks. This is shown as Layout C in **Figure 4.2b**.

Layout D: Frozen Layout

93. A frozen design was achieved in November 2024 following Phase 2 peat probing which focussed on the areas of infrastructure within the chilled design footprint. Further amendments were made to the design to avoid localised areas of deep peat, adjusting construction compound locations to reflect the proposed access track to the Site and confirmation of a roads design specification.

94. Following further fieldwork and collaboration, it was decided to remove a turbine ("T1" as shown in Layout C) from the design so that the proposed Development would appear as a more coherent whole in views towards the Site and to reduce landscape and visual impact to surrounding residential areas. T10 was also removed from the layout due to noise constraints.

95. The turbines were renumbered at this stage to run sequentially from 1 to 15 for Phase 1 and 16 to 23 for Phase 2. The frozen design and finalised turbine numbering is shown in **Figure 5.1** as well as in Layout D – Frozen Layout on **Figure 4.2d**.

96. Following design achieved in November 2024, further adjustment to proposed access track to avoid forested area was undertaken as agreement for turbine delivery using existing track through the forestry was not achieved.

97. To accommodate this new proposed access track, positions of turbines T1, T2 and T3 and their hardstands were adjusted. This frozen design is shown in **Figure 5.1** as well as in Layout D – Frozen Layout on **Figure 4.2d.**

6.3. Borrow Pits

98. It is expected that the majority of new stone for access tracks will be sourced from borrow pits within the Site. However, a worst case traffic volume for importing all required stone is assessed in **Chapter 11: Access, Traffic and Transport** in reaction to the scoping responses from consultees. In addition, a Borrow Pit Assessment (BPA) (**Technical Appendix 9.3**) has been carried out on site. As a result of this assessment, indicative borrow pits are shown in **Figure 5.1** . The final extent of any borrow pits (within the 50 m micrositing allowance) would be agreed as part of the CMS for the scheme and subject to detailed ground investigations to confirm suitability of material. Should further stone be required, any further borrow pit locations will be subject of an application which would be made to the relevant authority. The final reinstatement of these borrow pits would be agreed with the local authority in consultation with NatureScot prior to reinstatement works commencing.

6.4. Micrositing

99. 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.

7. Access

7.1. Offsite Access Route

100. The proposed Development would utilise the current access junction for Hare Hill Windfarm that adjoins the public road (A76).

101. The preferred turbine delivery route would start at the port of entry at Glasgow King George V Dock Glasgow heading south to the M77. From the M77 the route would then connect to the A76 towards New Cumnock and connect to site at the current access junction.

102. Not withstanding the above, the final turbine delivery route will not be known until the turbine supplier is appointed and they have in turn reached contractual agreements with the port, sea freight/shipping company and road haulier.

103. The condition of smaller, public roads along the access route would be surveyed and recorded prior to them being used for deliveries and decommissioning and construction traffic associated with the proposed Development. Where required, repair and maintenance work would be carried out on utilised roads during and following the decommissioning/construction period to rectify any identifiable damage which is directly attributable to the proposed Development.

104. As part of the development a detailed Construction Traffic Management Plan and Abnormal Load Assessment would be prepared which would identify the requirements for any road modifications, vegetation or tree trimming required along the access road.

7.2. Onsite Access Tracks

105. The access to the proposed Development is from the A76 east of New Cumnock. The access track runs south alongside a block of commercial forestry which then leads east to the first of the Hare Hill turbines. The track continues to the east connecting the small track spurs to each of the Hare Hill turbine hardstandings. The access track then turns south east and continues in this direction connecting with the three spurs of the Hare Hill Extension turbines. **Note**: an existing track runs through the commercial forestry. This track will not be utilised for abnormal loads during construction. It will be used as required for standard vehicle access during construction, operational access between phases, Hare Hill Extension and in emergencies. The proposed route can be viewed in **Figure 5.1**. The figure shows the proposed turbine layout and the proposed new access track. The tracks allow plant to dig new cable trenches and thereafter to access the site for operational and eventual decommissioning purposes.

106. After construction is complete the tracks will be left in place for routine maintenance of turbines.

7.3. Public Access

Recreational Enhancements

107. 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.

108. There is one right of way 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 right of way 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 right of way would require a diversion, due to the interaction with the proposed infrastructure. Following construction, the access tracks of the proposed Development would be used to replace some sections of the right of way.

109. Amendments to existing access arrangements within the Site will be detailed in an Access Management Plan prepared in advance of construction commencing. These will include an arrangement for communicating changes in access to relevant stakeholders.

7.4. Onsite Vehicular Access

110. Once the proposed Development is operational (if consent is granted) vehicular access will be limited to individuals directly involved in the maintenance of the proposed Development, the landowner and the agent, e.g. for ongoing forestry activities, and emergency vehicles.

8. Conclusion

111. This DAS provides an overview of the design process undertaken by the Applicant for the S36 application for the proposed Development.

112. This document summarises the relevant updates to planning, design updates, additional consultation activities and the final design solution for the proposed Development. The design revisions within the Site have facilitated further mitigation of potentially significant effects.

113. Further information on the residual effects is presented in the Environmental Impact Assessment Report (EIAR), as follows:

- **Chapter 6: Landscape and Visual;**
- **Chapter 7: Ecology;**
- **Chapter 8: Ornithology;**
- **Chapter 9: Geology, Hydrology and Hydrogeology;**
- **Chapter 10: Archaeology and Cultural Heritage;**
- **Chapter 11: Traffic, Transport and Access;**
- **Chapter 13: Noise; and**
- **Chapter 14: Other Issues.**

114. A comparative summary of the residual effects described in the above technical chapters is provided in **Chapter 15: Schedule of commitments**

115. This document has described the principles that have shaped and influenced the revised design of the proposed Development and how issues of access have been dealt with.

References

National Planning Framework 4 (NPF4). Available at National Planning Framework 4 - gov.scot

The Construction (Design and Management) Regulations 2015. Available at The Construction (Design and Management) Regulations 2015

Onshore wind turbines: planning advice. Available at Onshore wind turbines: planning advice - gov.scot

Onshore Wind: Policy Statement 2022. Available at Onshore wind: policy statement 2022 - gov.scot

Scottish Parliament (2018) *CLIMATE CHANGE PLAN*. Available at: Supporting documents - Climate Change Plan: third report on proposals and policies 2018-2032 (RPP3) - gov.scot

UK GOV (2024) *The Climate Change (Emissions Reduction Targets) (Scotland) Act 2024*. Available at Climate Change (Emissions Reduction Targets) (Scotland) Act 2024

UK GOV (2019) *The Climate Change Act 2008 (2050 Target Amendment) Order 2019*. Available at The Climate Change Act 2008 (2050 Target Amendment) Order 2019

Dumfries and Galloway Local Development Plan (2019). Available at Local Development Plan 2 (LDP2) | Dumfries and Galloway Council

The East Ayrshire Local Development Plan 2 (2024); Adopted Local Development Plan 2 · East Ayrshire Council

NatureScot pre-application guidance for onshore wind farms (2024). Available at NatureScot pre-application guidance for onshore wind farms | NatureScot