

Sheirdrim Renewable Energy Development Design and Access Statement (DAS)



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1 Introduction

- 1. The UK and Scottish governments have set ambitious climate change targets with net zero CO₂ targets for 2045 and in Scotland a 66% reduction in emissions by 2032. ScottishPower Renewables (SPR) is helping to lead the fight against climate change by developing renewable energy projects, such as this fully integrated renewables scheme called Sheirdrim Renewable Energy Project (the proposed Development).
- 2. SPR 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 now only produces 100% green electricity focusing on wind energy, smart grids and driving the change to a cleaner, electric future. The company is investing over £4m every working day in 2019 to make this happen and is 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. With over 40 operational windfarms, SPR manages all its sites through its world leading Control Centre at Whitelee Windfarm, near Glasgow.
- The proposed Development is a Renewable Energy Development that intends to make the use of available renewable energy technologies to maximise and optimise the renewable energy potential of the Site. For this consent application, SPR intend to construct a blend of renewable energy technologies, including 19 three-bladed horizontal axis wind turbines, 16 up to 149.9 m tip height and 3 up to 135 m tip height, with a combined rated output in the region of around 114 megawatts (MW) and around 20 MW of ground mounted solar arrays producing a combined output of around 134 MW or 360 to 380 GWh of electricity annually. This equates to the annual power consumed by approximately 99,200 average UK households. Around 38 MW of battery storage would also be installed to store energy and so provide flexible balance of energy and the delivery of the full potential of renewable energy to meet the demands of the national grid.
- 4. SPR intends to submit an application for the proposed Development under Section 36 of the1989 Electricity Act. In support of the application, SPR has undertaken an Environmental Impact Assessment (EIA) and produced its findings in this EIA Report. The EIA Report informs readers of the nature of the proposed Development, likely significant environmental effects and measures proposed to protect the environment, during site preparation, construction, and the operation of the proposed Development.
- 5. This Design and Access Statement (DAS) is submitted in support of the application for consent which has been submitted for the proposed Development. The DAS does not form part of the Environmental Impact Assessment Report (EIA Report). The DAS should be reviewed in the context of the EIA Report.

2 Site location

In order to understand the design of the proposed Development it is considered important to understand the Site and its context. Sheirdrim Renewable Energy Development is located within the Argyll and Bute Council (A&BC) administrative area and comprises of 19 wind turbines, ground mounted solar arrays, battery storage and associated site infrastructure such as substation and access tracks (the proposed Development) on land (the Site) within the Achaglass and Gartnagrenach estates located approximately 11 km south west of Tarbert, centred on NGR 181302, 657098. An aerial photograph of the Site and its surroundings are contained as Figure 1. A site location plan is contained as Figure 2 of this document. A plan showing the application boundary is contained as Figure 3.

2.1 Site description

- 7. A detailed Site description is contained within the EIA Report. The following paragraphs provide a general description of the Site.
- 8. The selected Site is part of the Achaglass and Gartnagrenach Estates and is located at the northern end of the Kintyre Peninsula, wholly within the Argyll and Bute Council administrative area, near the villages of Clachan and Whitehouse.
- 9. The Site forms part of a ridgeline of relatively remote upland plateau, on the northern Kintyre peninsula, comprising widespread coniferous plantation and some areas of open moorland. The Site is characterised by upland moorland/wet grassland within the eastern and south eastern extent of the Site, with commercial plantation forestry in the western extent of the Site, including Sheirdrim Hill. As the Site is partly a commercial forest, there are existing borrow pits and a series of forestry access tracks, including a main access haul track leading off the A83 on the northern side of the Site.
- Access to the Site is via the A83 which runs past the northern and western ends of the Site. The B842 runs along the eastern side of the peninsula between Campbeltown and Cloanaig and the B8001 which runs northeast to Kennacraig from Cloanaig. National Cycle Route (NCN) 78 also follows the B842 and the B8001. These B roads will not be used by any construction vehicles. The Kintyre Way passes along the southern boundary of the Site and may be used by construction vehicles in order to undertake localised improvements and construction of bird hide, access tracks and archaeological enhancements.

2.2 Surrounding area

- The immediate area surrounding the Site is rural in nature with land predominantly used for commercial forestry purposes and rural agriculture. The operational Freasdail Windfarm is located directly adjacent to the Site to the north east and the consented Eascairt Windfarm is located directly to the south east of the Site. The closest sizeable settlement is Tarbert, approximately 11 km north east of the Site, although there are smaller settlements nearby, including the villages of Clachan (approximately 2 km west of the nearest wind turbine), and Whitehouse (approximately 2.6 km north east of the nearest wind turbine). The immediate vicinity has relatively low population density, although there are a number of individual properties directly adjacent to the north and west.
- The closest landscape designations outwith the Site are the Knapdale /Melfort and West Kintyre (Coast) Areas of Panoramic Quality (APQs), approximately 3 km and 2.5 km to the northwest and west respectively (See EIA Report Figure 7.1). Further to the east, the North Arran National Scenic Area (NSA) and Wild Land Area (WLA) also fall within the study area. Tarbert Woods is the closest natural heritage designation and is a Special Area of Conservation (SAC) / Site of Special Scientific Interest (SSSI) (see Figure 4). There are no listed buildings or scheduled monuments within the Site.

3 Design policies

- The preparation of this DAS has had regard to Planning Advice Note 68: Design Statements, The Argyll and Bute Landscape Wind Energy Capacity Study 2017 (ABLWECS), Scottish Planning Policy (SPP) (June 2014) and the Argyll and Bute Local Development Plan 2015 (ABLDP) and its associated Supplementary Guidance.
- ^{14.} The design of the proposed Development was carefully considered in the context of national advice in respect of design, the development plan and supplementary guidance which is relevant to the proposed Development.

3.1 National guidance

- 15. The most important national policy documents relating to the siting and design of the proposed Development are The National Planning Framework 3 (NPF3), and Scottish Planning Policy (SPP) along with the associated Planning Advice Notes (PANs), and also the Onshore Wind Turbines: Planning Advice. See Chapter 4 of the EIA Report.
- In relation to the design and layout of windfarms, Table 1 in the SPP sets out the basis for a spatial framework in which a hierarchy of protection is defined. Group 1 areas such as National Parks and National Scenic Areas and are defined as *"Areas where wind farms will not be acceptable"*. Group 2 areas are based on a range of national designations, other nationally important environmental interests (such as wild land or carbon rich soils, deep peat and priority peatland habitat), and community separation (2km from cities, towns and villages identified in the Local Development Plan). Group 2 areas are defined as *"Areas of Significant Protection"*. Group 3 areas are defined as *"Areas with potential for wind farm development"* depending on detailed consideration against the specified policy criteria.
- 17. Having assessed the Site against these criteria and the Spatial Framework detailed in the ABLDP Supplementary Guidance. Guidance: Wind Energy, it is considered that the proposed Development lies within both Group 2 and Group 3 areas. The categorising of parts of the Site as Group 2 is deemed to be due to areas of carbon rich soils, deep peat and priority peatland habitat.
- 18. 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 windfarm design. The advice relating to windfarm 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.

3.2 Locational guidance

- 19. Scottish Planning Policy (SPP) (June 2014) provides support for wind development in principle and encourages local authorities to guide developments towards appropriate locations. Paragraph 154 states that planning authorities "should support the development of a diverse range of electricity generation from renewable energy technologies including the expansion of renewable energy generation capacity". Paragraph 155 also states that "development plans should seek to ensure an area's full potential for electricity and heat from renewable sources is achieved, in line with national climate change targets."
- In response to these policy requirements A&BC has undertaken a landscape capacity study (2018) to identify those landscapes which, in principle, have the capacity to accommodate wind turbines. The Argyll and Bute Landscape Wind Energy Capacity Study 2017 (ABLWECS) updated the Argyll and Bute Landscape Wind Energy Capacity Study 2012. The proposed Development site is within LCT6: Upland Forest Moor Mosaic. The key characteristics of this area are described as broad areas of undulating upland plateau lying within the interior of the Kintyre peninsula. The ABLWECS states the following in relation to this LCT:

"There is very limited scope for the Very Large typology (turbines >130m) to be accommodated. The narrow extent of this peninsula and its relatively low relief (especially in the northern part of this LCT) inhibits opportunities for turbines >150m high. Very large turbines in many locations would be likely to significantly intrude on views from both Gigha and Arran, considerably extending effects and potentially affecting the 'space and cluster' spatial patterns of existing wind farm development evident in the northern part of the peninsula in views from Arran. Turbines <150m may be able to be accommodated provided they are set well into the centre of the peninsula and occupy more contained sites which would minimise the effects of turbines of this size on the coastal fringes of Kintyre and on views from Arran and Gigha".

21. The ABLWECS also describes the character of the Upland Forest Moor Mosaic Landscape as follows:

"This land has a simple land cover of extensive coniferous forestry and moorland. It is sparsely settled and already accommodates operational and consented wind farm developments. Some of these key characteristics reduce sensitivity to large wind turbines although there are some more sensitive features. These include the more complex smaller scale hills and occasional narrow settled glens lying on the outer fringes of this upland plateau. More pronounced and rugged higher hills which lie within the core area of this landscape and the remote and little modified coast between Skipness and Tarbert would also be highly sensitive to wind energy development"

In terms of the applicability of the 2017 ABLWECS's findings to individual sites, the study states, "the purposes of assessing sensitivity in the wider arena of landscape planning is different to that undertaken as landscape and visual impact assessment which is specific to a particular project or development and its location". Therefore, it should be reinforced that whilst the findings of the ABLWECS have been considered in the design of the proposed Development, it gives a broad-brush view on the acceptability of windfarm development in the area, which should not be a substitute for individual and detailed landscape and visual assessment. A&BC through its policies is guiding the development of renewable energy, including wind turbines to the Site. The Site has, therefore, met the site selection criteria and was considered to represent a commercially viable option that warranted further investigation as a renewable energy development.

3.3 Development plan

- 23. The Development Plan is defined by the Town and Country Planning (Scotland) Act 1997, as amended, as being the local development plan; the planning authority's resolution of adoption and any supplementary guidance issued in connection with the local development plan. The Development Plan for the Site is the Argyll and Bute Local Development Plan 2015 (ABLDP) and its associated Supplementary Guidance.
- 24. EIA Report **Chapter 4** sets the proposed Development in the context of the relevant Development Plan policies. The Planning Statement provides an assessment of the proposed Development against the Development Plan and material considerations relevant to the decision-making process.

3.3.1 Argyll and Bute Local Development Plan 2015

- Argyll and Bute Council adopted the ABLDP in March 2015; the LDP is accompanied by Supplementary Guidance adopted in March 2016. This provides further detail and guidance on the policies within the LDP, and where necessary supplements these with additional policy requirements. The key ABLDP policy for the proposed Development is Policy LDP 6 Supporting the Sustainable Growth of Renewables, which states that "The Council will support renewable energy developments where these are consistent with the principals of sustainable development and it can be adequately demonstrated that there is no unacceptable significant adverse effect, whether individual or cumulative, including on local communities, natural and historic environments landscape character, visual amenity and that proposals would be compatible with adjacent land uses"
- 26. The policy states that the Council will prepare a spatial framework for windfarms and wind turbine developments over 50 m high as supplementary guidance, in accordance with SPP. This guidance was adopted in December 2016 in the form Supplementary Guidance 2: Renewable Energy. The spatial framework identifies areas which have potential for windfarm development, and those which don't, including areas requiring significant protection in accordance with the criteria set out in Table 1 of SPP. According to the spatial framework map, the proposed Development lies partly in a Group 3 Area (area with potential for windfarm development subject to other policy considerations).
- 27. **Table 3-1** lists the policies within the current LDP and supplementary guidance considered to be relevant to the proposed Development which have been considered during the design of the proposed Development and in the subsequent EIA.

LDP Policies	SG Policies				
	SG LDP Sustainable - Sustainable Siting and Design				
Policy LDP STRAT 1– Sustainable Development	Principles				
Policy LDP 3 – Supporting the Protection, Conservation	SG LDP ENV 9 – Development Impact on Areas of Wild				
and Enhancement of our Environment	Land				
	SG LDP ENV 12 - Development Impact on National Scenic				
Policy LDP 9 – Development Setting, Layout and Design	Areas (NSAs)				
Policy LDP10 – Maximising our Resources and Reducing	SG LDP ENV 13 - Development Impact on Areas of				
Our Consumption	Panoramic Quality (APQs)				
Policy LDP 11 – Improving our Connectivity and					
Infrastructure	SG LDP ENV 14 – Landscape				
Policy LDP5–Supporting the Sustainable Growth of Our					
Economy	SG LDP ENV7- Water Quality and the Environment				

Table 3-1: LDP Policies and Supplementary Guidance

4 Design principles

- ^{28.} A Constraints Plan of the Site was compiled based on field survey findings and desk study, as shown on **Figure 5**. This Plan shows various environmental features of the Site such as watercourses and slope gradient. The Constraints Plan, together with analysis of Zones of Theoretical Visibility (ZTVs) for the proposed Development, were used to inform the design process.
- ^{29.} Based on analysis and field work observations, a design concept for the proposed Development was generated identifying the preferred areas for turbines within the Site. The main design objectives were as follows:
- ^{30.} As part of the approach, a number of design principles and environmental measures have been implemented and incorporated into the proposed Development as standard practice, including the following:
 - consideration of the form of the underlying landscape and its scale;
 - · Avoidance where possible of the deepest areas of peat and also those areas which reflect better quality unmodified peat;
 - sensitive siting of the proposed infrastructure incorporating appropriate buffer distances from environmental receptors to avoid or reduce effects on the environment;
 - considering the size and scale of the proposed Development appropriate to the location and proximity to residential areas;
 - re-using existing forestry tracks and borrow pits as much as possible to access proposed turbine locations;
 - · design of the tracks to minimise cut and fill, reducing landscape and visual effects as well as costs;
 - inclusion and design of borrow pit(s) to minimise the amount of the material required to be imported to the Site; and
 - potential for up to 50m micrositing of infrastructure during construction to ensure the best possible location is chosen based on detailed Site investigations taking into account that T1, T3, T4, T7 and T11 move no closer to the nearest residential receptor.
- Throughout the design evolution of the proposed Development layout, a key driver was the consideration of potential landscape and visual effects on receptors and how the proposed Development would relate to the existing landscape character as well as existing windfarms in the landscape. In particular, regard has been taken to evaluate the scale and number of turbines proposed, cumulatively with existing windfarms in the area, in particular, the operational Freasdail Windfarm directly to the north, Cour Windfarm 5 km to the south and the consented Eascairt Windfarm to the southeast of the Site. The landscape and visual effects potentially caused by the proposed Development have been considered extensively from key receptors during the design of the proposed Development.
- 32. Siting and Designing Windfarms in the Landscape (Version 3a) SNH states that:

"In a wind farm, turbines can be arranged in many different layouts. The layout should relate to the specific characteristics of the landscape - this means that the most suitable layout for every development will be different. For a small wind farm, this might comprise a single row of wind turbines along a ridge; while, for a larger development, a grid of wind turbines is often taken as the starting point, with the turbines spaced at minimum technical separation distances."

- ^{33.} The solar areas have been selected using a similar approach to the wind turbine layout by applying technical and environmental constraints to the Site. The principle criteria for development of solar arrays, has been the identification of flat land and ideally south facing slopes. The general design parameters used have been as follows:
 - Aspect (Excludes all areas that are not within 135 and 210 degrees from north);
 - Slope (North facing <5° and South facing <12°);
 - Watercourses (20m buffer);
 - Avoids NVC Habitats of M17, M15 and M23;
 - Avoidance of Protected Species, in particular areas deemed suitable for Marsh Fritillary; and
 - Avoiding peat greater than 1m depth.
- ^{34.} The substation and battery storage facility also follow a similar requirement for positioning on flat land and avoiding sensitive habitat areas, deep peat and steep slopes. A construction and maintenance compound would also be required with similar design requirements, but its position would ideally need to be located near to the entrance and the development of the first wind turbine on entering the site.

- The onsite access tracks have been designed to use existing tracks as far as possible; whilst minimising cut and fill requirements in order to reduce the amount of ground disturbance, amount of material required for construction, loss of sensitive habitats and landscape and visual effects, particularly during construction. All access tracks needed to be designed to follow routes which do not include excessive gradients. This is to aid the safe delivery of turbine components and associated parts.
- ^{36.} Borrow pits would also be required as a source of rock to be used in the construction of the tracks, hardstandings and foundations. Borrow pit locations would need to minimise additional access tracks and provide easy opportunities to source suitable materials for construction. The total number and size of borrow pits was selected to meet the estimated volume of rock required to construct of the tracks, hardstandings and foundations.

5 Consultation

- 37. Consultation was undertaken as part of the EIA process.
- 38. An EIA Scoping Report was submitted to the Energy Consents Unit (ECU) in April 2019 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 June 2019. A summary of the key issues raised in the Scoping Opinion is provided in **Technical Appendix 6.1**. The Scoping Opinion is detailed in the consultation tables contained within each EIA Report **Chapters 7 to 15**, with reference to how the comments have been addressed.
- 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 in order to identify the windfarms with which the proposed Development could cause significant cumulative impacts. It was then decided which windfarms should be taken forward to the detailed cumulative assessment.
- 40. Public consultation in respect of the proposed Development was also undertaken with the local community in the form of public information days (PIDs). These PIDs were held in June 2019 in order to inform the local community of proposed Development and the progress of environmental studies and turbine layout. Public consultation is summarised in the Pre Application Consultation Report submitted in support of the application.

6 Design evolution

6.1 Landscape and visual design iteration

- ^{41.} SPR have been investigating the potential for a renewable energy development in this area since 2012, initially the Site was a windfarm wholly on Achaglass forest estate covering an area of 1528 ha. However, following environmental surveys the Site now comprises a smaller area covering 1248 ha on Achaglass and Gartnagrenach Estates and with advances in technology now incorporates ground mounted solar arrays and a battery storage facility.
- 42. SPR commissioned SLR Consulting to carry out Landscape and Visual Feasibility Studies in 2018 for the Site. These studies examined various layouts for the Site in respect of landscape and visual considerations but taking account of known environmental and technical constraints, such as set back from watercourses and known designated environmental and heritage sites. An initial layout consisted of 35 turbines at 180 m to blade tip height.
- 43. SPR commissioned ornithological surveys of the site, which commenced in 2012 (not continuous), and also started monitoring wind speeds at the site in 2016. Data from these studies plus additional desk based environmental studies fed into a layout that was presented in a Scoping Report submitted to the ECU. Following consideration of this information and further landscape review, a reduced site boundary and 26 turbine layout with 149.9 m tall wind turbines was presented at Scoping.
- The scoping layout and site boundary was further refined during the EIA process as site-based surveys were carried out and following consultation with consultees, in the form of responses to the Scoping Report (the Scoping Opinion), direct consultation with consultees and meetings with local community councils. Information collected during this stage of the design firstly fed into a 'Design Chill' layout of 19 turbines at 149.9 m. This layout also included areas of solar arrays and battery storage alongside possible substation locations. The Design Chill layout enabled the EIA and SPR technical team to undertake further studies and surveys and further refine the layouts of aspects including borrow pit locations and access track alignments.
- 45. Following detailed review, a final 'Design Freeze' or 'Application layout' was developed which now forms the basis of this application for consent. Whilst there has been no change in the number of turbines between the design freeze and design chill layouts, there have been a number of changes including change to positioning, scale of some turbines, alignment of roads and selection of borrow pits and substation locations. The final design is based on a full understanding of the technical and environmental constraints. With this information, the final layout also comprises features to enhance the Site, including a Habitat Management Plan and enhanced access for recreation.
- 46. A summary of the evolving layouts and design, and the reasons for the changes and design decisions is presented in **Table 6-1**. Figure 6 also illustrates the four layouts and visually illustrates how the design and application boundary has evolved through the design stages of the EIA process.

	Turbine Numbers	Tip height	Comments and reasons for design amendments
Initial layout (Pre-EIA studies)	35	180m	Considered to be the maximum case scenario in terms of generation, whilst meeting noise and other desktop constraints. Following feedback from the ornithology surveys it became apparent that there were areas of the Site which were important for birds, in particular geese, which would not be suitable for development.
1 st iteration (Scoping)	26	149.9m	Scoping layout was informed by preliminary landscape studies which considered that a turbine height of 149.9 m would be the maximum height suitable for this site given its setting against other windfarms in the area with smaller turbines. A single access off the A83 utilising the existing access to the Achaglass Forest Estate and Cour windfarm was included.
2 nd iteration (EIA studies)	19	149.9m	'Design Chill' layout which was based on the emergence of environmental constraints from baseline studies and in response to feedback from consultees and local community groups. Site infrastructure was developed including options for substation, borrow

			pit and access track locations. Search areas were also identified for solar development. Consideration of an alternative site access off the A83 was included with a view to diverting HGV construction deliveries away from a cottage (Glebe cottage) at the existing access.
Application layout	19	135-149.9m	'Design Freeze' layout which was based on the detailed examination of landscape views at key receptor locations and other detailed studies, such as habitat surveys, peat depth investigations and surveys for groundwater dependent terrestrial ecosystems (GWDTE). Of note, three turbines were reduced in size to 135 m to help balance the views of the site alongside the remaining site turbines and other nearby sites and further refinement of the site boundary. Two solar development areas were also refined based on the environmental constraints. Site infrastructure (access tracks and borrow pits) and locations of the substation, construction compound and battery storage were also amended following detailed on-site investigations and walkover surveys. This layout also includes two accesses to the site from the A83. A further feature of the final layout is access to the site for recreation (including access tracks, shelter and viewpoint), a bird hide, enhancement of archaeological features near to the Site and the Kintyre Way and the development of a Habitat Management Plan.

Table 6-2: Description of the design evolution stages

6.2 Tracks and infrastructure

- 47. Careful consideration was given throughout the design iteration process to the location of the various ancillary components of the proposed Development, including the cable routes, borrow pits, substation compound options and the access tracks within the Site. For example, small, localised areas of deeper peat have been avoided wherever possible and the number of watercourse crossings has been minimised.
- 48. The access points to the Site are shown on Figure 7. The design allows all abnormal loads e.g. turbines and all construction traffic to access the Site directly from the A83. This is to minimise the extent of road upgrades and minimal disturbance to settlements during the construction period. Within the Site, it is proposed to utilise existing tracks to minimise the amount of new track construction and also provide flexibility when accessing the Site.
- ^{49.} The proposed Development would re-use and share existing infrastructure from the existing onsite forestry operations and Cour Windfarm access tracks where possible. This includes sharing much of the timber haul route as an access track, thus maximising efficiency and reducing the cost to the consumer.

6.3 Embedded mitigation

- 50. Mitigation of the potential effects of the proposed Development has been predominately incorporated through the iterative design process. Changes made as a consequence of this iterative design process are considered to be embedded mitigation.
- ^{51.} There was a conscious decision to utilise the existing infrastructure within the Site in so far as was possible. The proposed Development contains a substantial amount of embedded mitigation as a result of the design process. The location of infrastructure seeks, in so far as is possible, to do the following:
 - use the existing infrastructure;
 - avoid localised areas of peat;
 - avoid identified sensitive ecological habitats;
 - retain an acceptable distance from properties;
 - minimise water course crossings;
 - minimise landscape and visual impacts; and
 - ensure acceptable noise levels are achieved.

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- ^{52.} The design evolution process which has been undertaken has resulted in the inclusion of further embedded mitigation measures for works which are required as part of the Site preparation, construction and operation of the proposed Development. This embedded mitigation includes the following:
 - minimising effects on those environmental features which were identified as part of the constraints mapping process;
 - minimising the length of the new track proposed;
 - minimising the number of new watercourse crossings; and
 - the sourcing of construction materials onsite, as far as possible.
- 53. Structures of 150 m or taller require to be lit with visible aviation lighting in accordance with Article 222 of the UK Air Navigation Order (ANO) 2016. In the case of wind turbines, the lights are usually mounted on the nacelle of the wind turbines and, at least three (to provide 360 degree coverage) low-intensity (32 candela) red lights at an intermediate level of half the nacelle height on the tower. In response to concerns with respect of turbine lighting and due to landscape design aspects the tip height of the proposed Development has been kept below 150m so that such lighting is not required.

7 Proposed Development

- 54. The proposed Development is described in detail in Chapter 3 of the EIA Report. An outline Construction and Environmental Management Plan (CEMP) is contained in the EIA Report as Technical Appendix 3.1. The layout of the proposed Development is contained in Figure 7. In summary the proposed Development would comprise:
 - wind turbines and ground mounted solar arrays;
 - battery storage units;
 - crane hardstandings for wind turbine installation;
 - transformer/switchgear housings located adjacent to turbines & solar arrays;
 - new and upgraded access tracks including watercourse crossings where necessary, passing places and turning heads;
 - two access points off the A83, with a preferred new access located away from a cottage immediately adjacent to the existing access;
 - Construction and maintenance compound;
 - underground electrical cabling;
 - compound containing substation, control building and battery storage;
 - health & safety and other directional site signage;
 - · recreational access paths providing access to the site from the Kintyre Way;
 - walker's shelter close to the Kintyre Way;
 - signage and access to archaeological features adjacent to the site; and
 - bird watchers hide and habitat improvements, including broadleaf tree planting and the re-wetting of peat areas previously drained.
- ^{55.} In addition to the above operational components of the proposed Development, construction of the proposed Development will also require:
 - Laydown area using an existing area adjacent to the forestry haul road;
 - a net woodland loss of 50.02 hectares;
 - search areas for up to 5 temporary borrow pits for the extraction of stone; and
 - up to two temporary Power Performance Masts (PPM).
- ^{56.} A new substation compound location has been identified within the Site, which would be utilised for a grid connection. The onsite substation would step up the voltage for transmission to the grid network. The grid connection option does not form part of this application and would be subject to a separate design and consent process undertaken by Scottish Hydro Electric Transmission plc.

8 Access

8.1 Access route

- ^{57.} The wind turbines would be delivered in sections with the longest deliveries being up to 65 m long, these components would be delivered to the Site via Campbeltown port with other components and materials being delivered using the existing road network.
- ^{58.} Two access points are currently included in the proposed Development. The first of these is an existing access at Glebe Cottage, the second is a new access 180 m south of Glebe Cottage. The new access is the preferred access as deliveries to the site would be directed away from the cottage avoiding any disturbance and visual intrusion for the residents of the cottage, and also providing better alignment for the delivery of the larger components to enter the Site. SPR would agree to only use this access if approved for use and would enter into a condition to ensure this was the case. However, in the absence of current agreement from A&BC and Transport Scotland, who have verbally agreed to the design of the new access, both accesses are included in the proposed Development and assessed in this EIA Report.

8.2 Internal access tracks

- ^{59.} Approximately 13.6 km of new onsite access tracks and approximately 4.4 km of upgraded track would be required to provide access to the wind turbines, control building compound, solar areas and construction compound.
- 60. Tracks would have a typical 5 m running width, wider on bends and at junctions. Where not possible to avoid areas of deepest peat, floating tracks would be required to be constructed. It is anticipated that there would be approximately 1.4 km of floating track, where consistent peat depths of between 1-1.5 m or greater are identified along with shallow topography in the area (below 5 %).
- ^{61.} A total of 4.4 km of the access route would be reused which is currently utilised for the existing forestry operations as a timber haul route, and which was also used to access the Cour Windfarm and which is proposed to be used by the High Constellation Windfarm application. The existing access route to site (general access road from the A83 to the Site) is in good condition, was widened for other windfarms and forestry operations and is generally suitable for very large turbine component deliveries. It is not expected to have to carry out any significant engineering works along this route; however, there may be a couple of sections which require minor upgrades or limited repair works within the existing road corridor.
- 62. Both access points off the A83 would require some levelling and minor earth works to create the necessary swept paths for the abnormal loads. Some tree removal would also be needed to create adequate entrances and a water main would need to be crossed.
- 63. The location of these would depend on the detailed Site design. Passing places have been incorporated into the proposed Development design to enable turbine delivery and general construction vehicles to pass each other safely whilst utilising the onsite access tracks. Locations of passing places would be established during construction works. The access tracks would be retained throughout the operational life of the proposed Development to enable maintenance of the turbines and replacement of any turbine components.

8.3 Public access – pedestrian

- 64. Public access to the proposed Development would be restricted during the construction of the proposed Development for obvious health and safety reasons due to construction activities, the movement of heavy plant and the erection of turbines. The Kintyre Way long distance route is partially within the Site.
- ^{65.} SPR is proposing to enhance several aspects of the site by improving local access and recreation opportunities. The enhancements being proposed are as follows:
 - access tracks for users of the Kintyre Way to enter the site with signage for a circular walk which would take visitors to a viewing point upon Cruach nam Fiadh. Stone seating, using locally cut rock from the Site borrow pits, would also be placed at various locations around the Site;
 - shelter for walkers close to the entrance to the Site from the Kintyre Way;
 - access and information boards to several archaeological features near to the Kintyre Way, which will provide a
 description of the features and some interesting archaeological context for the Site and the surrounding area; and

- bird hide, located north west of Lochan Fraoich, and accessible from the Kintyre Way for viewing bird species found within the south western part of the Site.
- 66. The proposed Development would provide information boards at several archaeological features identified on Site. These would comprise information boards for two Sheiling huts located just south of the Kintyre Way between T18 and T19, where there is evidence of a stream diversion and an enclosure, and at the site of a Longhouse (domestic building, byre and enclosure) situated west of the Kintyre Way between T16 and T19. The information boards would provide some background information on the features and graphics illustrating what the features may have looked like when in use.
- 67. Members of the public would be able to access the Site on foot and make use of the access tracks under the provisions of the Land Reform Act.
- ^{68.} During periods of maintenance, access by the public could be restricted depending on the nature of the maintenance activity.

8.4 Public access – vehicular

^{69.} 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 landowners and their agents, and emergency vehicles.

8.5 Turbine access

^{70.} It is not proposed that there would be public access to the proposed wind turbines. Due to health and safety reasons access to the turbines will be restricted to employees of, and contractors appointed by SPR.

FIGURES



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RENEWABLES	А	29/10/19	JRS	First Issue.	© Crown Copyright 2019. All rights reserved.		Design and Access Statement		
	Rev	Date	Ву	Comment		Ordnance Survey Licence 0100031673.	Aerial Photograph		

Development - EIAR	Drg No	00481.000	51.DAS.1.0
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	Date	29/10/19	OSGB36
	Figure	1	TM





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	KENEVVADLES	Rev	Date	By Comment		Ordnance Survey Licence 0100031673.	Application Boundary	Figure	3	TM





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	KENEVVADLES	Rev	Date	By Comment		Ordnance Survey Licence 0100031673. Proposed Site Layout	Proposed Site Layout	Figure	7	TM	

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