

# STRATHY SOUTH WIND FARM

## **SECTION 36C**

Design and Access Statement



## 1. INTRODUCTION

- 1.1.1 SSE Generation Limited (hereafter referred to as ‘the Applicant’) has submitted an application to the Scottish Ministers under Section 36C (the ‘S36C application’) of the Electricity Act 1989 (‘the 1989 Act’). The S36C application proposes the variation of the Section 36 consent (2018 Consent) granted by Scottish Ministers on 27 April 2018 under the 1989 Act for the construction and operation of the Strathy South Wind Farm T39 Layout (‘Consented Scheme’).
- 1.1.2 In addition, the Applicant is seeking direction under section 57(2) of the Town and Country Planning (Scotland) Act 1997 (‘the 1997 Act’) that planning permission would be deemed to be granted in respect of the varied description of the proposed development (‘the Proposed Varied Development’).
- 1.1.3 The purpose of the S36C application, is to vary to the Description of the Development to change the specification of the 39 turbines by increasing the maximum tip height from up to 135 m to up to 200 m. The increase in turbine height would lead to a consequent increase in land take to accommodate larger turbine foundations and also the regulatory<sup>1</sup> requirement for turbine lighting, as the turbines would exceed 150 m. The Applicant has also reviewed the on-site access tracks and reduced the track length requirements by 0.5 kilometres (km) by removing track loops. In its Scoping Opinion, the Scottish Ministers confirmed that they “*are of the view that it would be feasible for the Company to apply for these variations under section 36C of the Act.*” Further information regarding the Proposed Varied Development is detailed in Chapter 2: Description of Development in Volume 2 of the Environmental Impact Assessment Report (EIAR) which accompanies the application.

### 1.2 Purpose of Design and Access Statement

- 1.2.1 The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008<sup>2</sup> require applications for ‘major’ development to be supported by a Design and Access Statement. There is no statutory requirement for applications for consent under the 1989 Act to be supported by a Design and Access Statement, however the Applicant has opted to provide one as a good practice measure.
- 1.2.2 The purpose of this Design and Access Statement is to provide information on the principles and approach that have guided the design process and access arrangements. This Design and Access Statement demonstrates how the site and its surroundings have been fully appraised to ensure that the final design solution is the most suitable for the site. This Design and Access Statement describes the starting point for the Proposed Varied Development and subsequent iterations to the layout that were made in response to the environmental and technical issues that were identified during the environmental impact assessment (EIA) process and in response to the scoping and consultation process. In line with the Scottish Government guidance<sup>3</sup> the Design and Access Statement does not extend to the consideration of internal aspects of individual buildings.

### 1.3 Development Description

#### ***Proposed Variation to the Consented Scheme***

- 1.3.1 Table 1.1 summarises the key changes proposed to the Consented Scheme. A complete description of the proposed changes is provided in Chapter 2: Description of Development (EIAR Volume 2:

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<sup>1</sup> The Air Navigation Order 2016. (URL: <http://www.legislation.gov.uk/uksi/2016/765/contents/made>).

<sup>2</sup> Town and Country Planning (Development Management Procedure)(Scotland) Regulations 2008, (SSI 2008/432).

<sup>3</sup> Scottish Planning Series Circular 3 2013: Development Management Procedures. (URL: <https://www.gov.scot/publications/planning-series-circular-3-2013-development-management-procedures-2/>).

Main Report). The layout of the Proposed Varied Development is illustrated in Figure 1.1 in Appendix A of this statement.

**Table 1.1: Summary of Proposed Key Changes between the Consented Scheme and the Proposed Varied Development**

Characteristic	Consented Scheme	Proposed Varied Development	Summary of Variation
Tip Height	Up to 135 m	Up to 200 m	Up to 65 m increase
Turbine Capacity	3.4 MW	5.6 MW (indicative)	Up to 2.2 MW increase
Turbine Lighting	As per Condition 10 of the 2018 Consent <sup>4</sup> aviation infra-red lighting would be fitted to turbines and omni-directional red lighting would be fitted to turbines at the cardinal points.	Aviation lighting requirements for turbines up to 200 m to be agreed with consultees.  For the purposes of the EIA a 'worst-case' of all 39 turbines being lit with 2,00 candela visible red lighting has been presented.	The s36C application is for the worst case, but precise requirements for aviation lighting will be subject to the outcome of consultation.

### ***Key Components of Proposed Varied Development***

1.3.2 The Proposed Varied Development is described in full in Chapter 2: Description of Development (EIAR Volume 2: Main Report). The Proposed Varied Development would include the following key components (shown on Figure 1.1 in Appendix A):

- 39 turbines, each with a maximum tip height of 200 m and rotor diameter of up to 162 m, and associated crane pads;
- Turbine foundations and hardstandings;
- Access tracks (31.4 km);
- Watercourse crossings;
- Substation;
- Up to seven borrow pits;
- Temporary lay down areas;
- Temporary construction compound;
- Temporary batching plant; and
- Welfare building.

<sup>4</sup> It should be noted that a minimum ground clearance of 31 m would be maintained for the blades to minimise the potential bird collision risk.

## 2. DESIGN

### 2.1 Site Location

- 2.1.1 The application site ('the site') covers an area of approximately 1,785 hectares (ha) and the main site (i.e. part of the red line boundary forming a u-shape) lies approximately 12 km south of Strathly Village in Sutherland (Figure 2.1 in Appendix A).
- 2.1.2 The site is located within the Strathly South conifer plantation, a non-native conifer plantation. No residential properties are located within the site.
- 2.1.3 The site is owned by eight landowners (6 of whom have infrastructure on their land, the remaining two landowners will have habitat management works carried out within their ownership boundaries). The Applicant would have separate leases for the land from each landowner for the duration of the construction, operation and decommissioning Proposed Varied Development (50 years).

### 2.2 Key Design Considerations

- 2.2.1 The design process for the Proposed Varied Development considered changes required to the Consented Scheme to accommodate the increase in tip height, increase in turbine capacity and subsequent turbine lighting requirements. Planning policy, environmental considerations, technical considerations and consultation activities were reflected in the design process.

#### *Planning Policy Context*

- 2.2.2 A separate Planning Statement has been prepared to support the application and should be referred to for a detailed planning policy appraisal. Technical Appendix 1.3: Energy and Planning Policy Framework (EIAR Volume 4) describes the legislative and policy background with regards to the Proposed Varied Development. A summary of the planning policy context is included below.

#### *National*

- 2.2.3 The National Planning Framework<sup>5</sup> (NPF3) is a long-term strategy for Scotland. It is the spatial expression of the Scottish Government's Economic Strategy, and of plans for development and investment in infrastructure. Part of the vision is of Scotland as a low carbon place, where the opportunities arising from the ambition to be a world leader in low carbon energy generation have been seized. NPF3 is informed by, and aims to help achieve, the Scottish Government's climate change and renewable energy targets. NPF3 acknowledges the energy sector accounts for a significant share of Scotland's greenhouse gas emissions and addressing this requires capitalising on Scotland's outstanding natural advantages, including its significant wind resource. NPF3 makes it clear that onshore wind will continue to play a significant role in de-carbonising the energy sector and diversifying energy supply.
- 2.2.4 The Scottish Planning Policy (SPP)<sup>6</sup> requires planning authorities to define a spatial framework identifying those areas that are likely to be most appropriate for onshore wind farms. The spatial frameworks must be based on the criteria listed below.
- Group 1: Areas where wind farms will not be acceptable:
    - National Parks and National Scenic Areas.
  - Group 2: Areas of significant protection:

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<sup>5</sup> Scottish Government (2014). National Planning Framework 3. (URL: <https://www.gov.scot/publications/national-planning-framework-3/>)

<sup>6</sup> The Scottish Government (2014). Scottish Planning Policy, The Scottish Government, Edinburgh, June 2014. (URL: <http://www.gov.scot/Publications/2014/06/5823/6>).

- Recognising the need for significant protection, in these areas wind farms may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.
- Group 2 areas include World Heritage Sites; Natura 2000 and Ramsar sites; Sites of Special Scientific Interest; National Nature Reserves; sites identified in the Inventory of Gardens and Designed Landscapes; sites identified in the Inventory of Historic Battlefields; areas of wild land as shown on the 2014 SNH map of wild land areas; carbon rich soils, deep peat and priority peatland habitat; and an area not exceeding 2 km around cities, towns and villages identified on the local development plan.
- Group 3: Areas with potential for wind farm development:
  - Beyond Groups 1 and 2, wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria.

2.2.5 More generally, the siting and design of development should take account of local landscape character. Decisions should take account of potential effects on landscapes and the natural and water environment, including cumulative effects. Applicants should seek to minimise adverse impacts through careful planning and design.

#### *Local*

2.2.6 At a local level, the statutory Development Plan covering the site comprises the following:

- Highland-wide Local Development Plan<sup>7</sup> (HwLDP), adopted April 2012;
- Caithness and Sutherland Local Development Plan<sup>8</sup> (CasPlan), adopted August 2018; and
- Relevant supplementary guidance, particularly the Onshore Wind Energy Supplementary Guidance<sup>9</sup> (OWESG), adopted November 2016.

2.2.7 HwLDP Policy 67 'Renewable Energy Developments' is the 'lead' Development Plan policy as it has been specifically formulated to deal with renewable energy developments and it is supported by the OWESG.

2.2.8 The OWESG contains a spatial framework to accord with the provisions of the spatial frameworks included in SPP (and summarised in paragraph 2.2.4 above).

#### *Proposed Varied Development*

2.2.9 Design and Access Statements do not make any judgements regarding the acceptability of proposed development in relation to policy. The Planning Statement which accompanies this application contains a policy appraisal for the Proposed Varied Development and should be referred to for a review of compliance with the material planning considerations. Planning policy informed the design of the Proposed Varied Development from the outset and the Applicant took cognisance of planning policy as part of the design process.

2.2.10 With reference to the OWESG spatial framework, the vast majority of the site is identified within a Group 3 area (where there is potential for wind farm development) which reflects the boundary of the woodland plantation. The proposed wind turbines are wholly located within this area a section of access track appears to fall within a Group 2 (area of significant protection), however, there are no predicted issues in terms of peat and carbon rich soils (as found in the EIAR). This is discussed further in Chapter 4 & 5 of the Planning Statement.

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<sup>7</sup> The Highland Council (2012). Highland-wide Local Development Plan. (URL: [https://www.highland.gov.uk/info/178/local\\_and\\_statutory\\_development\\_plans/199/highland-wide\\_local\\_development\\_plan](https://www.highland.gov.uk/info/178/local_and_statutory_development_plans/199/highland-wide_local_development_plan)).

<sup>8</sup> The Highland Council (2018). Caithness and Sutherland Local Development Plan. (URL: [https://www.highland.gov.uk/downloads/file/19712/casplan\\_adopted](https://www.highland.gov.uk/downloads/file/19712/casplan_adopted)).

<sup>9</sup> The Highland Council (2016). Onshore Wind Energy: Supplementary Guidance – Strategic Environmental Assessment Finalised Environmental Report. (URL: [https://www.highland.gov.uk/downloads/file/15173/finalised\\_environmental\\_report\\_september\\_2016](https://www.highland.gov.uk/downloads/file/15173/finalised_environmental_report_september_2016))



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### ***Environmental Considerations***

- 2.2.11 In addition to the policy considerations identified, key environmental issues and constraints considered in the design process were established through a combination of desk-based research, extensive field survey and consultation (through the EIA scoping process).
- 2.2.12 The design process considered the following environmental issues:
- landscape character and visual amenity within a 45 km study area;
  - ornithology, including updated surveys for breeding bird activity and bird flight activity in the site;
  - noise, including a noise survey and assessment to characterise the existing and predicted noise environment at the nearest residential dwellings surrounding the site;
  - cultural heritage, including mapping all known assets within the site, assets of national importance within a 15 km study area to assess the potential for visibility and setting effects, and Inventoried Garden and Designed Landscapes within a 30 km study area to assess the potential for setting effects;
  - the public road network in the vicinity of the site to assess the potential for traffic and transport effects on road users;
  - sensitive fauna, with the mapping of the presence of European protected species;
  - sensitive habitats, particularly peat forming habitats (supported by an additional peat probing survey) and habitats dependent on groundwater;
  - hydrology and hydrogeology, including identifying all sensitive surface water features; and
  - forestry removal, in the context of the Control of Woodland Removal Policy and Scottish Forestry Strategy.

### ***Technical Considerations***

#### ***Site Working Efficiency***

- 2.2.13 The design of the Proposed Varied Development sought opportunities for more efficient working of the site during construction and operation. Locations of laydown areas, tracks, the concrete batching plant and the temporary construction compound were reviewed to consider the potential for increased efficiency of the site. Consideration was also given to utilisation of the Yellow Bog Road during the initial construction phase to allow mobilisation of plant to the western side of the site.

#### ***Borrow Pit Requirements***

- 2.2.14 Due to larger wind turbines requiring larger turbine foundations, there was a requirement for additional aggregate material to be sourced to construct the foundations. Consideration was given to the use of site-won material via additional on-site borrow pits to minimise the need to bring material to site via the local road network.

#### ***Land Take***

- 2.2.15 The design sought to minimise the additional temporary and permanent land take related to the larger turbines and associated changes.

#### ***Substation Requirements***

- 2.2.16 Due to the increase in turbine capacity, the substation dimensions were required to increase. It was also important to ensure an appropriate standoff distance between the substation and turbines for health and safety reasons; therefore, the substation (formerly known as the switching station in the Consented Scheme), was relocated to allow for a safe topple distance from the turbines.

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*LiDAR technology*

- 2.2.17 Three permanent met masts were included in the Consented Scheme. Consideration was given to the potential to replace the consented met masts with LiDAR technology due to the benefits LiDAR has over anemometry masts. LiDAR can provide the following benefits:
- LiDAR can measure at higher heights-typically up to 200 m;
  - shallower and smaller concrete plinths typically required when compared to a met mast;
  - less susceptible to icing; and
  - eliminates the requirement for working at height.

*Ground Conditions*

- 2.2.18 The suitability of ground conditions was considered during design of the Proposed Varied Development layout, with areas of peat and steep gradients identified.
- 2.2.19 Ground elevations on-site range between 130 m Above Ordnance Datum (AOD) and 200 m AOD with the lowest elevations located towards the centre of the site.
- 2.2.20 The presence and depth of peat was assessed at more than 2,100 locations. The peat was found to vary across the site in terms of thickness, surface slopes and apparent characteristics. Much of the peat was confirmed to have been disturbed by the commercial forest operations and peat thickness varies from zero (0) to 5.0 m.
- 2.2.21 Where wind farm infrastructure is proposed in areas where peat is present, data was augmented by the peat probing. Appropriate mitigation measures were developed to reduce peat slide risk. Further details are contained in EIA Report Chapter 10: Soil and Water (EIAR Volume 2) and Technical Appendix 2.2: Borrow Pit Appraisal; Technical Appendix 10.1: Peat Landslide Hazard Risk Assessment; and Technical Appendix 10.2: Peat Management Plan (EIAR Volume 4).

***Consultation Activities***

*Scoping*

- 2.2.22 In accordance with Regulation 12 of Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) ('the EIA Regulations 2017'), the Applicant sought a Scoping Opinion from the Scottish Ministers on the environmental information to be provided in the EIAR. The request was accompanied by a Scoping Report<sup>10</sup>, which set out a summary description of the Proposed Varied Development, identified the issues proposed to be included in the EIAR and proposed an approach to the assessment of effects in each case. The Scoping Report was simultaneously issued to a list of statutory and non-statutory consultees. A Scoping Opinion was received from the Scottish Ministers on 18<sup>th</sup> July 2019.
- 2.2.23 The content of the Scoping Opinion, as well as details of the issues raised by each organisation and the Applicant's response on each issue, is provided in Technical Appendix 1.1: Consultation Register (EIAR Volume 4).

*Community Engagement*

- 2.2.24 The site lies completely within the boundary of Strathy & Armadale Community Council. The Bettyhill, Strathnaver & Altnaharra Community Council boundary lies beyond the west of the site and the Melvich Community Council boundary lies beyond the east of the site.
- 2.2.25 The three Community Councils above were first contacted about the Proposed Varied Development in March 2019, by the Community Engagement Manager, on behalf of the Applicant.

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<sup>10</sup> Ramboll (2019) Strathy South Wind Farm 2019 – Scoping Report

- 2.2.26 The Applicant has embarked on various meetings with the surrounding community groups, details of which can be found in Table 2.1 below. At each meeting the Proposed Varied Development was introduced, feedback was received, and contact details were provided.

<b>Table 2.1: Community Consultation</b>	
<b>Community Council</b>	<b>Meeting Date</b>
Strathy & Armadale Community Council	03/06/2019
Melvich Community Council members	04/06/2019
Bettyhill, Strathnaver & Altnaharra Community Council	03/06/2019 03/08/2019

#### *Public Consultation Events*

- 2.2.27 Following engagement with the community councils detailed in Table 2.1, a public engagement event was held in Strathy Hall, Strathy on 27<sup>th</sup> August 2019 and consisted of a 'drop-in' session throughout the afternoon and evening. A1 display boards presenting an overview of the Scoping Layout, the development timeline, changes to the Consented Scheme, construction information, environmental information, community and next steps were displayed along with photomontages from key viewpoints.
- 2.2.28 Details of the event were communicated to key stakeholders in the preceding weeks including the community councils as well as the three ward councillors from The Highland Council (THC). Feedback from attendees (11) was very positive, 10 were supportive of the proposal and one was not.
- 2.2.29 It was intended a further public consultation event would take place on 24<sup>th</sup> March 2020 to present the Proposed Varied Development (Gatecheck Layout) and provide information on the infrastructure changes. This event was to be held as a one-day 'drop in' session in Strathy Hall. Unfortunately, due to Covid 19 and associated travel restriction, this exhibition had to be cancelled in line with Scottish Government guidance at the time. As an alternative, to maintain engagement with the local community, the Applicant undertook an online exhibition on the SSER Strathy South Website<sup>11</sup>. An advert advising that the planned exhibition had been cancelled was placed in the Northern Times newspaper, and an advert for the event was posted on 'Strathy Community' Facebook pages.
- 2.2.30 Exhibition information available on the website included plans of the Proposed Varied Development, information boards detailing the key environmental effects, along with an explanation of the consenting process for a Section 36C Variation Application and the current stage that the project is at within that process. Information was also provided on the extensive habitat management work which is planned both on-site and off-site. Local councillors, the MSP and MP were advised in advance of these exhibitions in writing.
- 2.2.31 Postcards were posted to 667 addresses on 28<sup>th</sup> May 2020, covering the Melvich, Strathy and Armadale, and Bettyhill, Strathnaver and Altnaharra Community Council areas. The postcard requested that the local community provide their views on the Proposed varied Development via the online feedback form the Strathy South website address noted above. 544 individual website views have been recorded from the online exhibition on the Strathy South Wind Farm website, in the run up to submission of the Section 36C Variation Application<sup>12</sup>. A significant increase in website views was recorded in the week following the postcard delivery.

<sup>11</sup> <https://www.sserenewables.com/onshore-wind/in-development/strathy-south>

<sup>12</sup> At the time of writing (30 July 2020)



## 2.3 Design Evolution and Alternative Layouts

- 2.3.1 The Proposed Varied Development is one that builds on the Consented Scheme, with the turbine locations remaining the same.

### *Design Evolution*

- 2.3.2 The main design changes between the Consented Scheme and the Proposed Varied Development are set out in Table 1.1 above and include the maximum tip height increasing from up to 135 m to up to 200 m; turbine capacity increasing from 3.4 MW to 5.6 MW; and additional requirements for turbine lighting.

### *Iterations of the Design*

- 2.3.3 This section describes the following layouts and identifies the key design changes between each design iteration:

- Layout 1: Consented Scheme (April 2018);
- Layout 2: Scoping Layout (May 2019); and
- Layout 3: Gatecheck Layout (March 2020).

#### *Layout 1: Consented Scheme (April 2018)*

- 2.3.4 Layout 1 is that of the Consented Scheme and is presented on Figure 2.2 (Appendix A), it comprised the following:

- 39 three-bladed horizontal axis wind turbines, with a maximum tip height of up to 135 m;
- Turbine foundations and hardstandings (temporary infrastructure land take (per turbine): 0.098 ha and permanent land take (per turbine): 0.122 ha);
- 32 km of access tracks;
- 15 stream crossings;
- Three anemometry masts;
- A single switching station;
- A construction compound;
- A 100 m x 100 m concrete batching plant;
- Two laydown areas<sup>13</sup>; and
- Four borrow pits.

#### *Layout 2: Scoping Layout (May 2019)*

- 2.3.5 The Scoping Layout considered the same site boundary, number of turbines (39) and infrastructure placement as the Consented Scheme (Figure 2.3 in Appendix A), with the key design differences highlighted in the Table 2.2.

<b>Table 2.2: Overview of Consented Scheme and Proposed Variations for the Scoping Layout</b>			
	<b>Consented Scheme</b>	<b>Scoping Layout</b>	<b>Reasoning</b>
Access Track Length	32.0 km	30.8 km	To reduce peat disturbance
Turbine Foundations & Hardstandings	Temporary infrastructure land take (per turbine): 0.098 ha. Permanent land take (per turbine): 0.122 ha.	Temporary infrastructure land take (per turbine): 0.1 ha. Permanent land take (per turbine): 0.25 ha.	To accommodate larger tip height turbines.

<sup>13</sup> Note the consent states one laydown area while the figures show two laydown areas.

**Table 2.2: Overview of Consented Scheme and Proposed Variations for the Scoping Layout**

Lighting	As per Condition 10 of the 2018 Consent aviation infra-red lighting would be fitted to turbines and omni-directional red lighting would be fitted to turbines at the cardinal points.	Aviation lighting requirements for turbines up to 200 m to be agreed with consultees.	Current regulations <sup>14</sup> requires 'en-route obstacles' taller than 150 m to be provided with aviation lighting scheme.
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*Layout 3: Gatecheck Layout (March 2020)*

2.3.6 The Gatecheck Layout (referred to hereafter known as the Proposed Varied Development, as defined in March 2020), is presented on Figure 1.1 (Appendix A), which would comprise:

- 39 three-bladed horizontal axis wind turbines, with a maximum tip height of up to 200 m (maximum 162 m rotor diameter);
- Turbine foundations and hardstandings (additional 0.11 ha land take per turbine (combination of temporary and permanent when compared to the Consented Scheme);
- Up to 32 km of access tracks (the increase in track length from the Scoping Layout is primarily due to the connections between T24 and T26 and T13 and T19 being switched from what was proposed at Scoping, this change has avoided deep peat as per SEPA's request but increased overall track length on-site. It is also a result of the substation relocating to maintain the required standoff to turbines for health and safety reasons);
- 16 stream crossings;
- Two permanent LiDAR;
- On-site substation and associated laydown area;
- A construction compound;
- A 100 m x 100 m concrete batching plant;
- Two laydown areas; and
- Up to seven borrow pits.

2.3.7 The grid connection corridor between Strathy North Wind Farm and the site would remain as per the Consented Scheme.

2.3.8 The Proposed Varied Development considers the same site boundary and turbine locations as the Consented Scheme. Changes to the associated infrastructure have been proposed and Table 2.3 provides details on the changes.

**Table 2.3: Summary of Key Changes between the Consented Scheme and the Proposed Varied Development**

	Consented Scheme	Proposed Varied Development	Summary of Change (i.e. the Proposed Variation)
<b>No. of Turbines</b>	39	39	No change
<b>Tip Height</b>	Up to 135 m	Up to 200 m <sup>15</sup>	Up to 65 m increase
<b>Rotor Diameter</b>	Up to 104 m	Up to 162 m	Up to 58 m Increase
<b>Hub Height</b>	83 m	119 m	36 m increase

<sup>14</sup> The Air Navigation Order 2016. URL: <http://www.legislation.gov.uk/uksl/2016/765/contents/made>

<sup>15</sup> It should be noted that a minimum ground clearance of 31 m would be maintained for the blades to minimise the potential bird collision risk.

<b>Table 2.3: Summary of Key Changes between the Consented Scheme and the Proposed Varied Development</b>			
<b>Access Track Length</b>	32.0 km	31.4 km	Deletion of approximately 0.5 km of on-site track <sup>16</sup> .
<b>Turbine Foundations &amp; Hardstanding</b>	Temporary infrastructure land take (per turbine): 0.098 ha. Permanent land take (per turbine): 0.122 ha. 50 m micro-siting allowance for turbine positions <sup>17</sup> .	Temporary infrastructure land take (per turbine): 0.080 ha. Permanent land take (per turbine): 0.250 ha. 100 m micro-siting allowance for selected turbines: T1, T4, T9, T18, T19, T33, T42, T29, T52, T57, T69 and T72.	Additional 0.11 ha land take (combination of temporary and permanent) <b>per turbine</b> . Note this is based on 'worst case' estimates currently.  A number of turbines are identified as being situated on deep peat (T9, T18, T19, T33, T42, T29, T52, T57 and T72). Pre-application consultation with SEPA identified a benefit to having an increased micro-siting allowance applied to certain turbines to allow these turbines to be moved to areas of shallower peat. the Applicant has identified the following turbines which would benefit from an increased micro-siting allowance of 100 m: T1, T4, and T69 <sup>18</sup> .
<b>Borrow Pits</b>	4 borrow pits	Up to seven borrow pits	Up to three additional borrow pits have been identified in the northwest of the site. This is to accommodate the larger turbine foundations whilst minimising the need to bring material on-site.
<b>Lighting</b>	As per Condition 10 of the 2018 Consent aviation infra-red lighting would be fitted to turbines and omni-directional red lighting would be fitted to turbines at the cardinal points.	Aviation lighting requirements for turbines up to 200 m to be agreed with consultees.  For the purposes of the EIA a 'worst-case' of all 39 turbines being lit with 2,00 candela visible red lighting has been presented.	The s36C application is for the worst case, but precise requirements for aviation lighting will be subject to the outcome of consultation. Consultation with the CAA and other relevant consultees is currently taking place.

<sup>16</sup> Please note that this is for SSER's 'preferred route', the 'alternative route' would result in 32 km of track so the same as the Consented Scheme.

<sup>17</sup> The locations of the proposed turbines and associated infrastructure would be subject to micro-siting to take account of more detailed topographical and geotechnical surveys which would take place prior to construction commencing. This application seeks to retain the consent condition for turbine positions and track routes to be amended by up to 50 m with the approval of an Environmental Clerk of Works (ECOW), with input from site archaeologists, ecologists and any other relevant specialist supervising construction activities

<sup>18</sup> Additional micro-siting for T4 would allow for increased safety distance between the turbine and the proposed substation. T1 and T69 have been identified through the Peat Landslide Hazard Risk Assessment of being situated on steep slopes locally.

**Table 2.3: Summary of Key Changes between the Consented Scheme and the Proposed Varied Development**

<b>Substation (previously Switching Station on all documentation associated with the Consented Scheme)</b>	The switching station as consented was located to the south of the spur road to T9.	The proposed substation and associated temporary laydown area is now located to the west of T4.	The Consented Scheme's switching station has been replaced by a substation to accommodate the additional generating capacity. The location has been revised to allow for the increased size and required temporary laydown area, whilst maintaining the required separation distance between the turbines and the substation.
<b>Laydown Areas</b>	Two laydown areas located to the north of T43 and within the borrow pit to the east of T8 <sup>19</sup> .	Two laydown areas located to the north of T43 and to the east of the track between T11 and T17.	The laydown area previously located within the borrow pit to the east of T8 has been relocated to the east of the track between T11 and T17, to allow for more efficient working of the site.
<b>Construction Compound</b>	One construction compound located the west of the track between T4 and T8.	One construction compound located to the east of T4.	Relocated north and east from consented location, to allow for more efficient working of the site.
<b>Permanent Met Masts/LiDAR</b>	Three permanent met masts located east of the track between T2 and T6, on the track between T24 and T26, on the track between T35 and T36.	Two permanent LiDAR; located southeast of T36 and west of T70.	LiDAR equipment and locations would replace the consented met masts.
<b>Concrete Batching Plant</b>	One 100 m x 100 m concrete batching plant to the north of T43.	One 100 m x 100 m batching plant located to the east of the track between T11 and T17.	Dimensions of batching plant remain as consented, location has been revised to allow for more efficiency on-site during the construction period.
<b>Watercourse Crossings</b>	15 watercourse crossing.	16 watercourse crossings.	One new watercourse crossing has been identified on the spur road to T9 <sup>20</sup> .
<b>Yellow Bog Road</b>	Permitted for 4 x 4 wheel drive vehicle usage.	Proposal to upgrade Yellow Bog Road for initial construction phase.	Upgrades to Yellow Bog Road would be contained within the non-qualifying habitat either side of the existing track to allow for mobilisation of plant to the western side of the site.

## 2.4 Preferred Option

- 2.4.1 The preferred option which was been taken forward for assessment in the EIAR and subsequent application for consent is Layout 3, which is presented in Chapter 2: Description of Development (EIAR Volume 2) and presented on Figure 1.1 (Appendix A).

<sup>19</sup> It should be noted that the 2018 Consent plans show two laydown areas, but the written documentation makes reference to one laydown area. Reference to one laydown area is an error and the Consented Scheme always proposed two.

<sup>20</sup> The labelling of watercourse crossings has continued from the previous, Consented Scheme version of the layout. Therefore, as watercourse crossings have been removed as the track layout has evolved the numbering has continued hence why the label of 19 is shown on Figure 1.1. There are only 16 watercourse crossings required for the Proposed Varied Development.

### **3. ACCESS**

#### **3.1 Public Access**

- 3.1.1 There are no Core Paths that pass through the site. As such, no closures or diversions to Core Paths are required. However, there is a Hill Track which runs through the site. During construction there would be a requirement for temporary closure of this hill track.
- 3.1.2 The Applicant proposes that all public access through the site would be monitored and the Applicant could require restrictions to walkers to be escorted in the interest of health and safety. An Access Management Plan would be prepared as part of the Consent requirements and this would detail all specific measures to be taken during construction including temporary track closures.

#### **3.2 Site Access**

- 3.2.1 It is anticipated that construction traffic bound for the site, would access from the east, via the A9 and the A836. Abnormal loads (for delivery of turbine blades) are anticipated to originate from Scrabster and would be transported to the site via the A9 (north of the A836). Chapter 8: Roads and Traffic (EIAR Volume 2) includes assessment of the Proposed Varied Development on:
- driver delay;
  - road safety;
  - community effects; and
  - the physical effects of heavy good vehicle (HGV) traffic on the public road infrastructure.

## **4. CONCLUSION**

- 4.1.1 This Design and Access Statement provides an overview of the design process undertaken by the Applicant while preparing the application for the Proposed Varied Development. It summarises the relevant policy, environmental and technical considerations; the design approach; consultation activities and the final design solution. It details how the design evolved through a series of iterations to ensure that the aims of the design strategy were achieved, and environmental and technical considerations were fully taken into account.



## **APPENDIX A: FIGURES**

Figure 1.1: Proposed Varied Development

Figure 2.1: Site Location

Figure 2.2: Consented Scheme (April 2018)

Figure 2.3: Scoping Layout (May 2019)



## Legend

- ▬ Site Boundary
- Turbine
- Water Crossing Points
  - Water Crossing
  - Water Crossing - New
  - ▲ Water Abstraction Location
- LiDAR Options
  - ▲ LiDAR A
  - ▲ LiDAR B
  - LiDAR Track
- Access Track
  - Cut
  - Floating
  - Upgrade
- Potential Access
  - - Preferred Access Route
  - - Alternative Access Route
  - - Common Access Route
- Indicative Cable Route
  - Preferred Indicative Cable Route through Strathy North
  - Alternative Indicative Cable Route through Strathy North
  - Common Indicative Cable Route through Strathy North
  - - Existing Yellow Bog Track, Surfacing to be Upgraded and Minor Localised Widening
- Details
  - Substation Temporary Laydown Area
  - Construction Compound
  - Site Boundary
  - Substation
  - Hardstand
  - Batching Plant
  - Amended Laydown Area
  - Borrow Pit

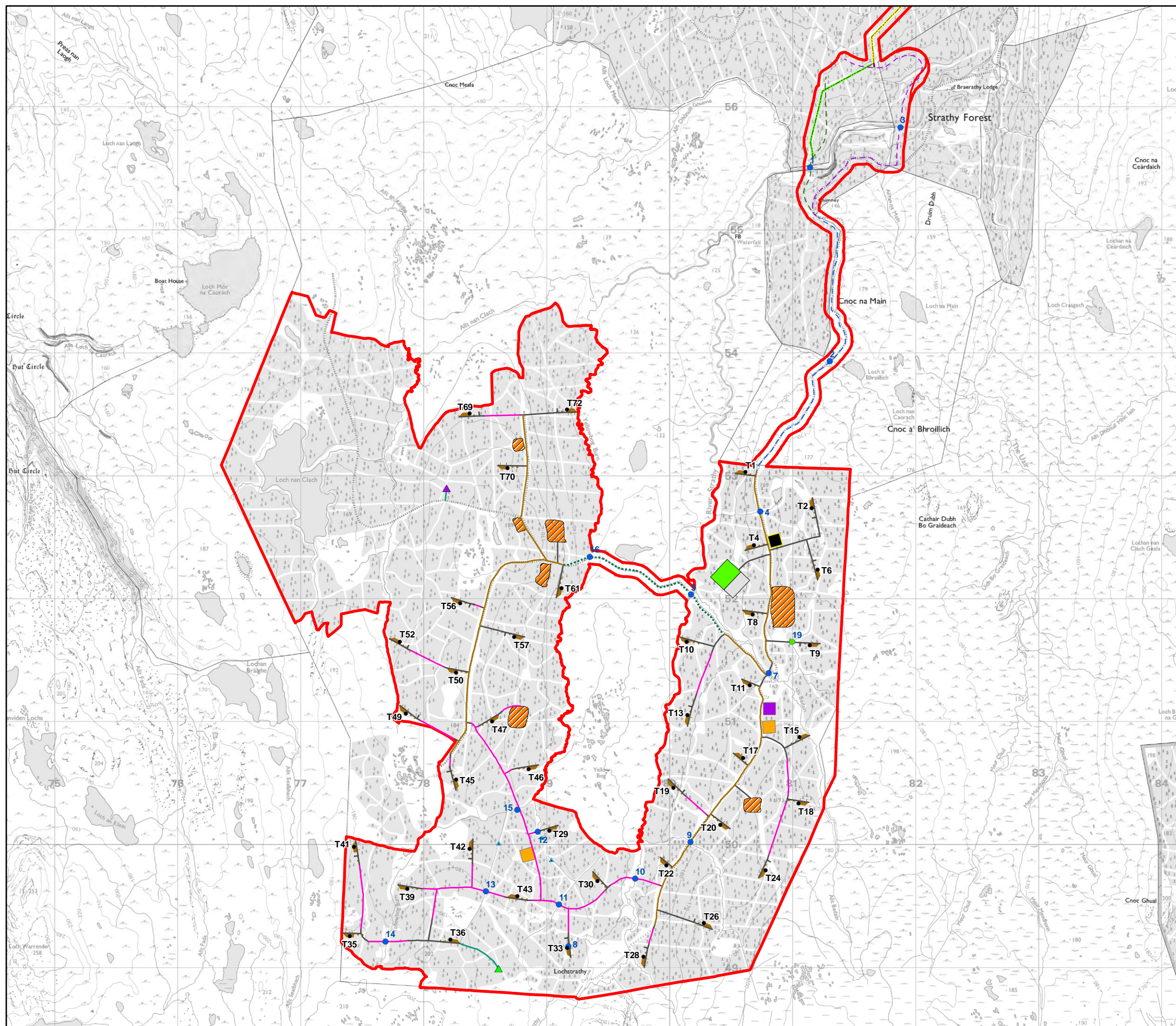
Scale 1:30,000 @ A3

0 0.5 1 Km



**Figure 1.1**  
**Proposed Varied Development**

**Strathy South Wind Farm**  
**Design and Access Statement 2020**





# Key

 Site Boundary



Scale 1:100,000@ A3

0 5 Km

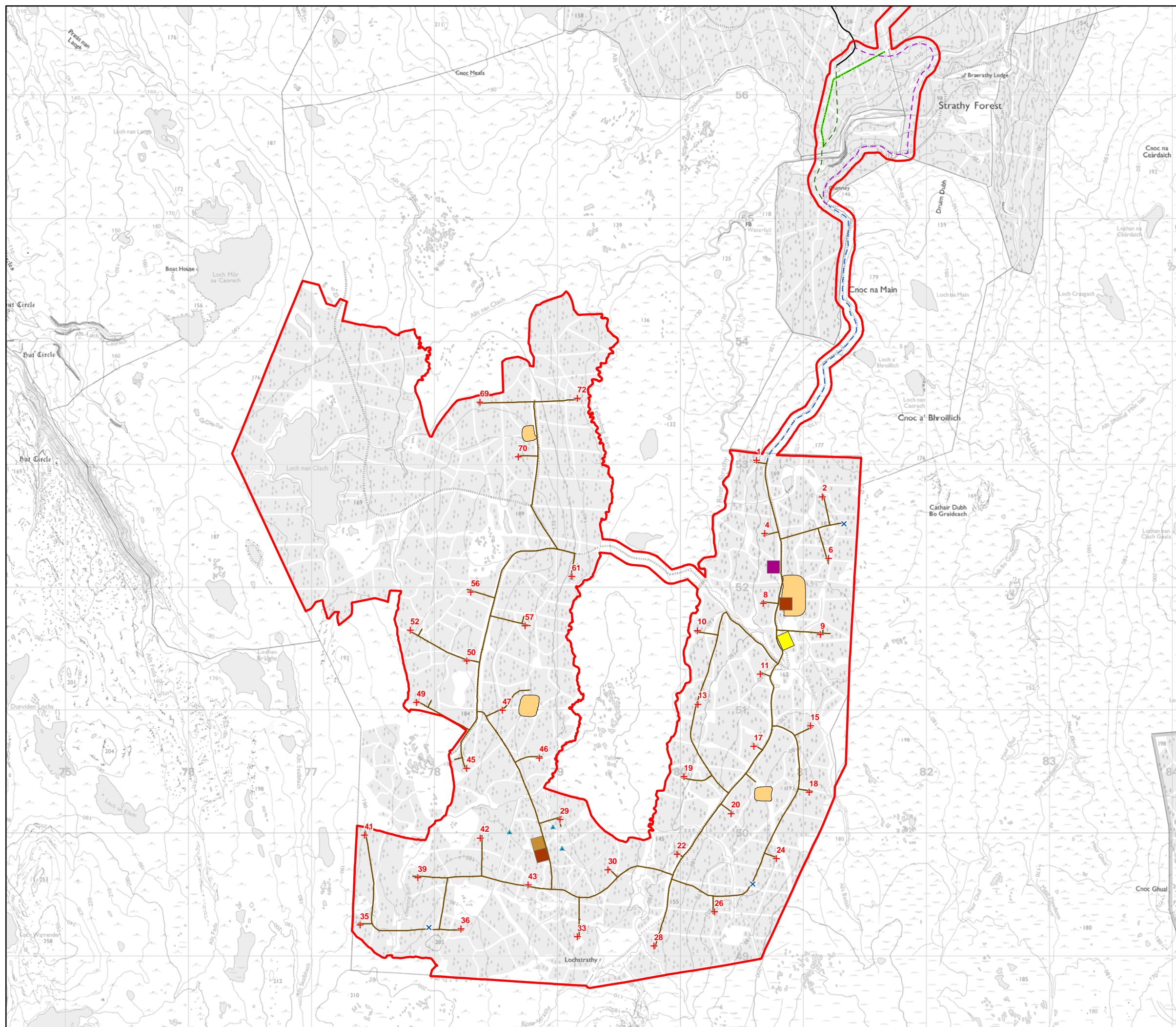


Figure 2.1

Site Location

Strathy South Wind Farm  
Design and Access Statement 2020





- Site Boundary
- ▲ Water Abstraction Location
- + Turbine
- × Permanent Met Mast
- Potential Access**
- Preferred Access Route
- Alternative Access Route
- Common Access Route
- Tracks
- Strathy North Access Route
- Indicative Cable Route**
- Preferred Indicative Cable Route through Strathy North
- Alternative Indicative Cable Route through Strathy North
- Common Indicative Cable Route through Strathy North
- Concrete Batching Plant
- Construction Compound
- Laydown Area
- Switching Station
- Borrow Pit

Scale 1:30,000 @ A3

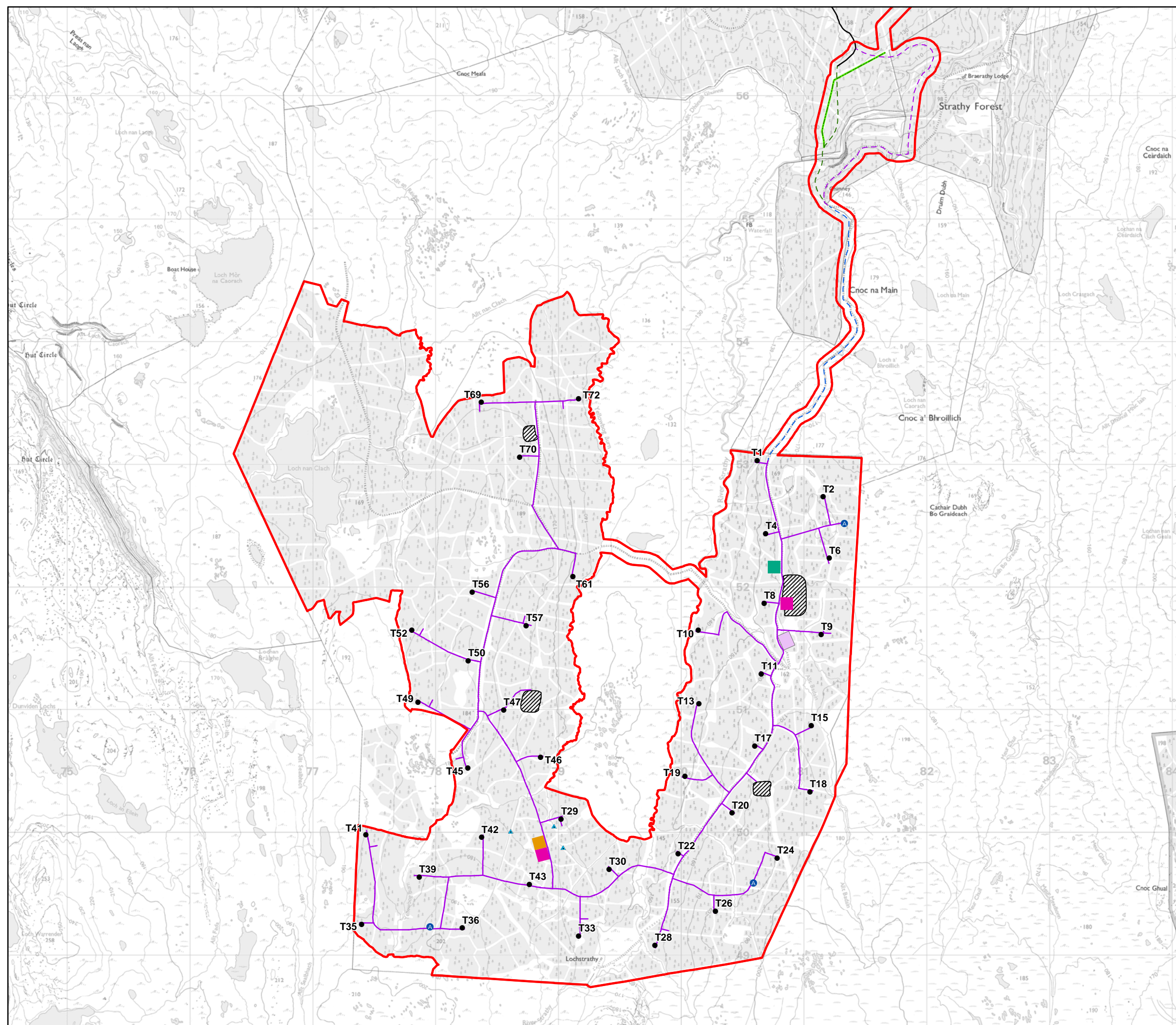
0 1 Km



**Figure 2.2**  
**Consented Scheme (April 2018)**

**Strathy South Wind Farm**  
**Design and Access Statement 2020**





- Site Boundary
- Turbine
- A Permanent Met Mast
- ▲ Water Abstraction Location
- Proposed Access
- Potential Access**
  - Preferred Access Route
  - Alternative Access Route
  - Common Access Route
  - Strathy North Access Route
- Indicative Cable Route**
  - Preferred Indicative Cable Route through Strathy North
  - Alternative Indicative Cable Route through Strathy North
  - Common Indicative Cable Route through Strathy North
- Laydown Area
- Batching Plant
- Construction Compound
- Switching Station
- Borrow Pit

Scale 1:30,000 @ A3

0 1 Km



**Figure 2.3**  
**Scoping Layout (May 2019)**

**Strathy South Wind Farm**  
**Design and Access Statement 2020**