

OUR VISION

To create a  
world powered  
by renewable  
energy



## South Kyle II Wind Farm

Scoping Report Non-Technical Summary



February 2022

Vattenfall



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# 1. Introduction

A Scoping Report has been produced and submitted by Vattenfall Wind Power Ltd (Vattenfall) to the Energy Consents Unit to obtain feedback from relevant consultees regarding detail of the proposed South Kyle II Wind Farm, south of Dalmellington in East Ayrshire, Scotland.

This Scoping Report Non-Technical Summary has been produced to summarise the information which is described in more detail within the South Kyle II Wind Farm Scoping Report. This document also shows visual examples of infrastructure and equipment associated with a wind farm.

## 1.1. The Applicant

Vattenfall is a leading European energy company with approximately 20,000 employees, owned by the Swedish state. For more than 100 years Vattenfall has powered industries, supplied energy to people's homes and modernised the way its customers live through innovation and cooperation.

Vattenfall aims to make fossil-free living possible within a generation and is leading the transition to a more sustainable energy system through growth in renewables and climate-smart energy solutions for our customers.

Vattenfall has over 50 wind farms, onshore and offshore, across five countries and pioneered co-locating wind with solar energy generation and battery storage. They have been in the UK since 2008, investing over £3.5 billion in enough wind to power nearly a million British homes. Vattenfall owns the largest onshore wind farm in England and Wales, Pen y Cymoedd, and in Scotland operates wind farms on the Isle of Skye and in Aberdeenshire. At a local level Vattenfall is constructing the neighbouring consented South Kyle wind farm, due to begin commercial operation in Q1 2023, and Quantans Hill Wind Farm in Dumfries and Galloway, currently in the planning process.

Vattenfall are committed to promoting a wellbeing economy by ensuring they achieve long term investment in the local communities where they operate. They focus on the environmental and social aspects of their developments and work together with local and national stakeholders to achieve shared goals.

## 1.2. Consultants

Natural Power Consultants Limited (Natural Power), the lead planning consultancy on the project, has been providing expertise to the renewable energy industry since the company was formed in 1995 and is one of the UK's leading renewable energy and infrastructure consultants. As well as development and EIA services, Natural Power also provide expert advice and due diligence consultancy, site construction management and site operation and maintenance.

Natural Power currently employs over 400 people working full time on providing renewable energy services internationally. In Scotland, Natural Power has offices in Stirling and Inverness, and its headquarters 'The Green House' is an award winning, environmentally friendly office building located in Dumfries and Galloway, just 15km south of the Proposed Development.

Testimony to Natural Power's experience and ongoing commitment to competency and continual improvement, its Planning and Environment department is accredited by the Institute of Environmental Management and Assessment and EIAs prepared by Natural Power display the IEMA quality mark. In addition, Natural Power also operates in formally accredited health and safety (ISO 45001), environmental (ISO 14001) and quality (ISO 9001) management systems.

Other consultants involved in the Scoping Report have provided independent professional input for Aviation, Noise, Cultural Heritage, Ornithology, Forestry and Socioeconomics:

- Pager Power – Aviation
- MBEC –Ornithology

- TNEI – Noise
- GUARD – Cultural Heritage
- DGA – Forestry
- BiGGAR Economics – Socioeconomics

### 1.3. Terminology

- The ‘Proposed Development’: the turbines and all associated infrastructure proposed for South Kyle II Wind Farm;
- The ‘Proposed Development Area’: all land within the current application site boundary, including the main wind farm area.
- Environmental Impact Assessment (EIA): A process by which information on the likely potential environmental, social, and health effects of a proposed development are assessed.
- Environmental Impact Assessment Report (EIAR): The report by which the EIA is recorded.

## 2. Overview of the Proposed Development

The Proposed Development is located in East Ayrshire, south-east of the B741, south of Dalmellington and south-west of New Cumnock. Figure 1 illustrates the location the Proposed Development. Figure 3 defines the current proposed turbine layout including the site constraints identified to date.

The design of the Proposed Development presently consists of:

- Up to 17 wind turbines at a maximum height to blade tip of between 180 m to 220 m
- Reinforced concrete gravity turbine foundations
- Crane hardstand and temporary laydown areas
- Upgrading of existing and creation of new access tracks
- Temporary borrow pits
- Underground electricity cables
- Anemometry mast(s)/Lidar;
- External transformer housing
- Signage
- Temporary construction and storage compounds, laydown areas and ancillary infrastructure (toilets, temporary portacabins)
- Drainage and drainage attenuation measures (as required)
- Substation, compound and control building: and
- Battery/energy storage and hydrogen production.

Existing access routes will be utilised where possible, but additional site tracks would also be required. The routes for the tracks will be chosen to minimise potential impacts on the environment, while taking account of other site-specific constraints. The site tracks will be constructed as either a ‘Cut’ or ‘Floating’ track. Where possible, watercourse crossings will be minimised and where these cannot be avoided, suitable watercourse crossings will be identified and assessed. The final route locations will be included in the EIAR.

A 30-year operational period is likely to be sought for the Proposed Development, following which decommissioning of this project would be undertaken.

Prior to construction commencing, a Construction Environmental Management Plan (CEMP) would be created and agreed with Easy Ayrshire Council through an appropriately worded condition. This will ensure the impacts from construction are kept to a practical minimum.

The CEMP would include amongst other things; measures that would be undertaken by contractors to ensure good site practice, procedures for transport and storage of potentially pollution substances and waste management. This would ensure the environment will not be significantly adversely affected as a direct result of constructing the wind farm.

Should the Proposed Development be consented, best practice guidelines and method statements will be adopted to ensure that the development does not impact negatively on elements of the local environment.

The Proposed Development lies wholly within an area of forestry owned and managed by Forestry and Land Scotland (FLS). It is proposed that the turbine layout be designed to minimise felling as far as possible, in line with Scottish Government guidelines. In addition, existing forest routes will be used where possible following discussions with the landowner.

At least six months prior to decommissioning of the site, a Decommissioning Method Statement would be prepared and agreed with relevant consultees. Vattenfall expects a planning condition regarding decommissioning to be attached to the consent. Should the Proposed Development be consented, an associated restoration fund may include salvage from turbine components.

### 3. Wind Turbine Details

The specific wind turbine models have not yet been selected but it is expected to be a horizontal axis machine with three rotor blades. Current models have approximately 6 megawatts (MW) to 7MW generating capacity, but this is likely to be upgraded by the time of construction. Wind turbine elements and coordinates are detailed below:

**Table 33.1: Indicative Turbine details and co-ordinates**

<b>Turbine ID</b>	<b>Easting</b>	<b>Northing</b>	<b>Maximum Tip Height (m)</b>
1	252380	607120	220
2	253104	607599	220
3	253208	605395	220
4	254646	609159	220
5	254472	608671	220
6	254864	608279	220
7	252590	605927	220
8	254114	606746	220
9	252816	608035	220
10	251805	606345	220
11	253391	605892	220
12	252363	606632	220
13	253173	606354	220
14	253696	605256	220
15	254045	605752	220
16	253862	606223	220
17	254585	607861	220

*Source: Natural Power*

## 4. Photographs

Below are example photographs of infrastructure associated with the construction and operation of a wind farm.

**Example of Culvert at South Kyle Wind Farm:**



*Source: Natural Power*

**Example of reinstated land and completed access track at South Kyle Wind Farm:**



*Source: Natural Power*

**Example of Turbine Foundation at South Kyle Wind Farm:**



*Source: Natural Power*

**Example of Battery Storage Facility for a Wind Farm:**



*Source: Vattenfall Wind Power (Ltd)*

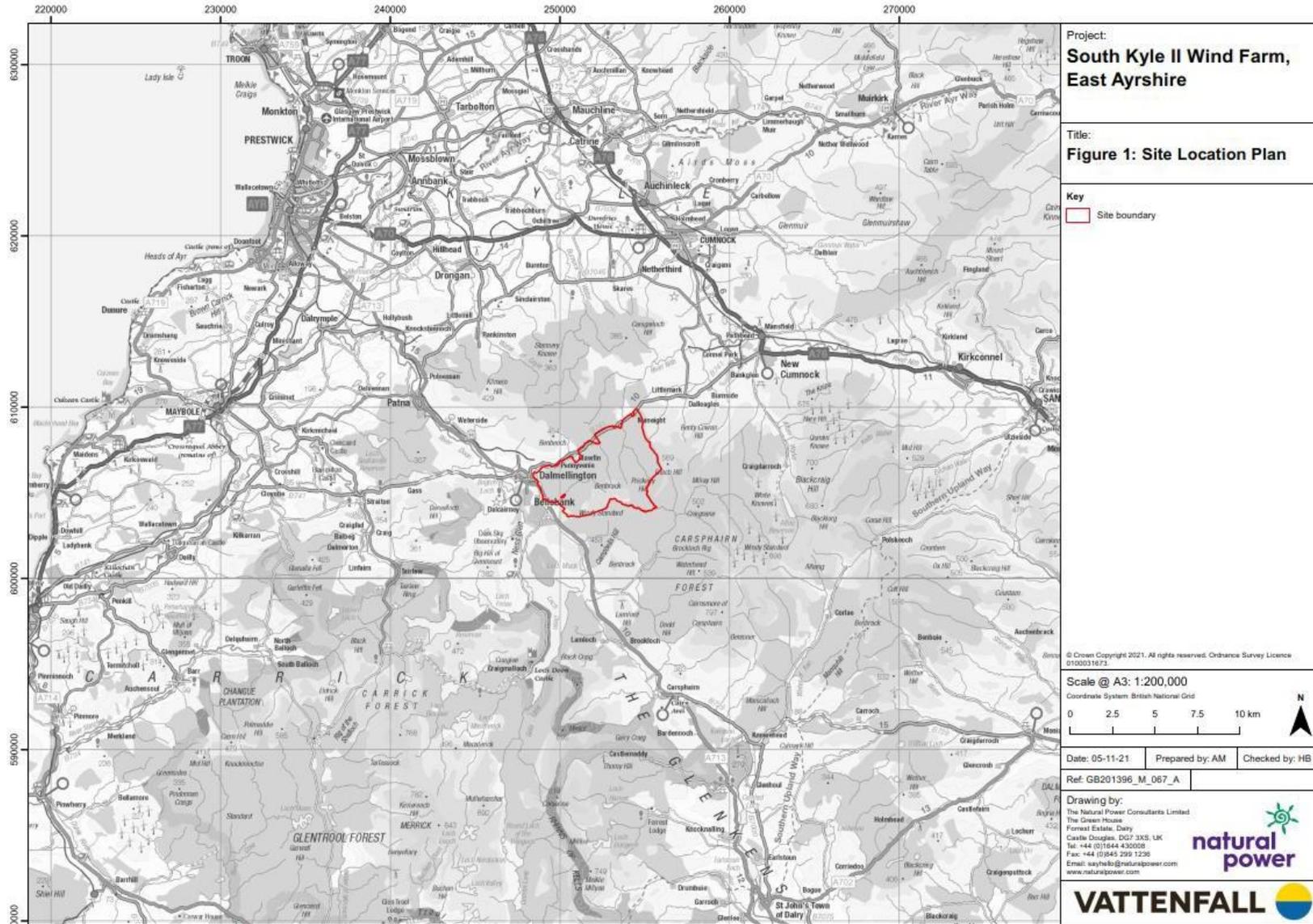
**Example of Substation Infrastructure:**



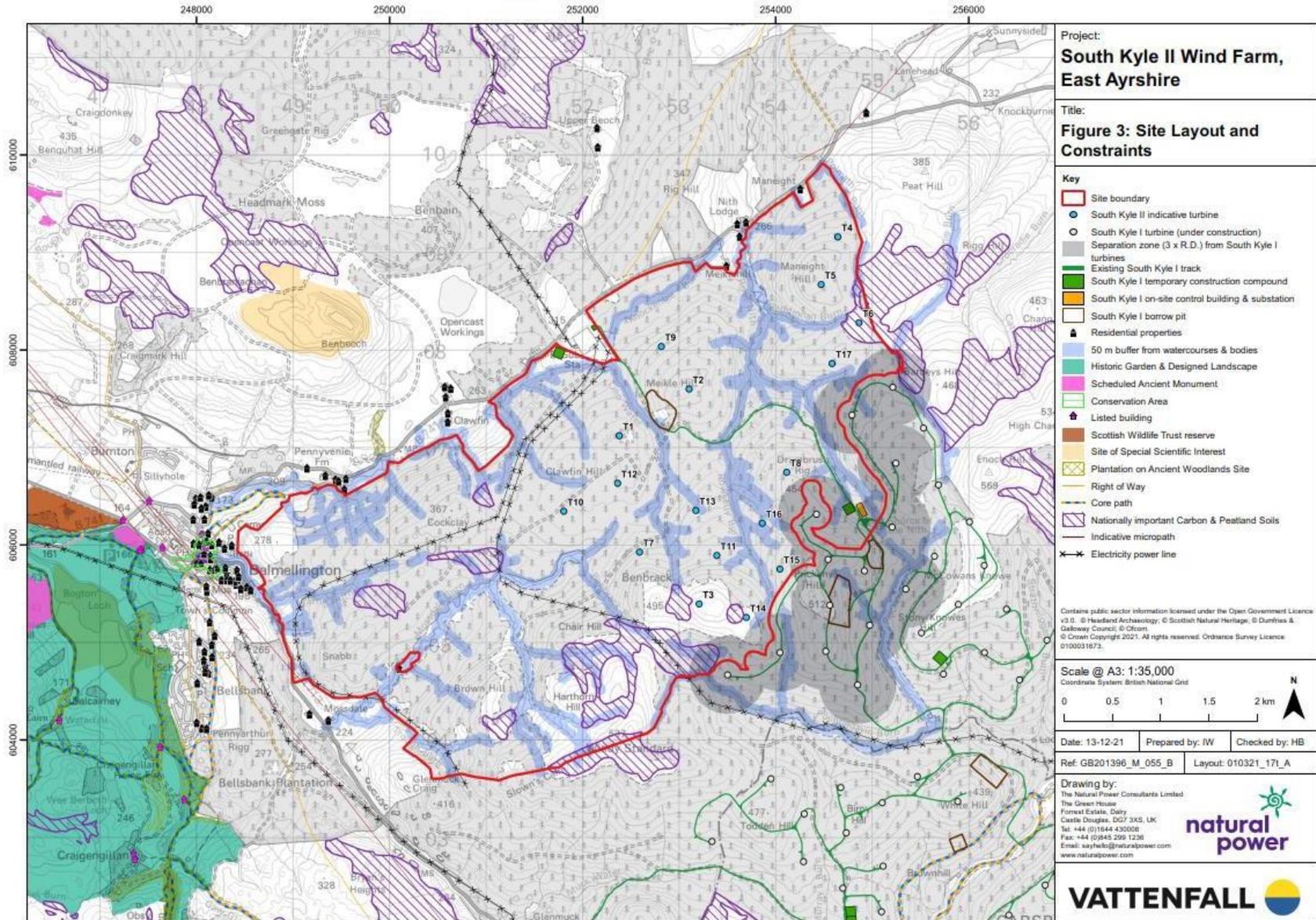
*Source: Vattenfall Wind Power (Ltd)*

# 5. Figures

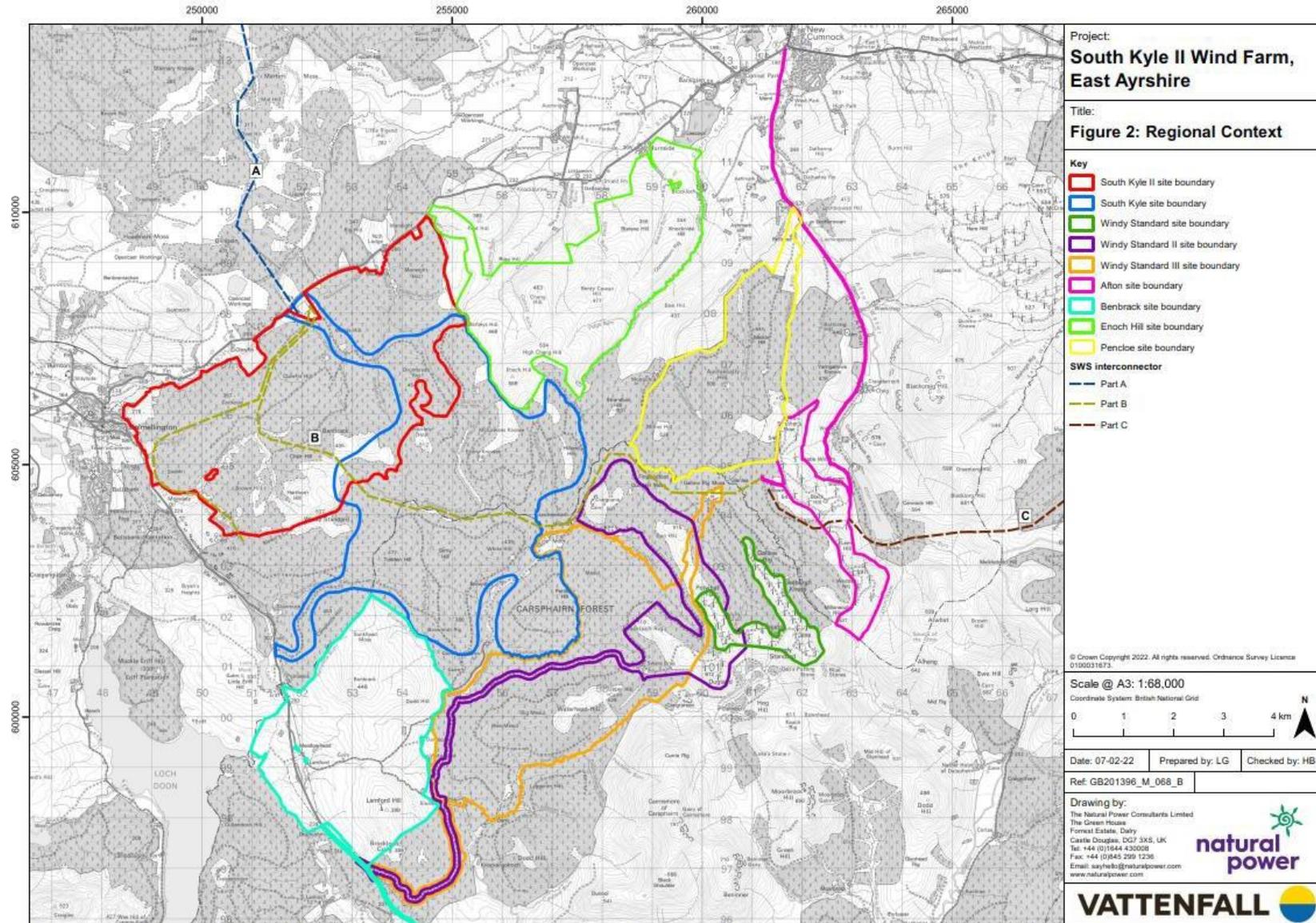
Below are figures from the Scoping Report associated with the Proposed Development.



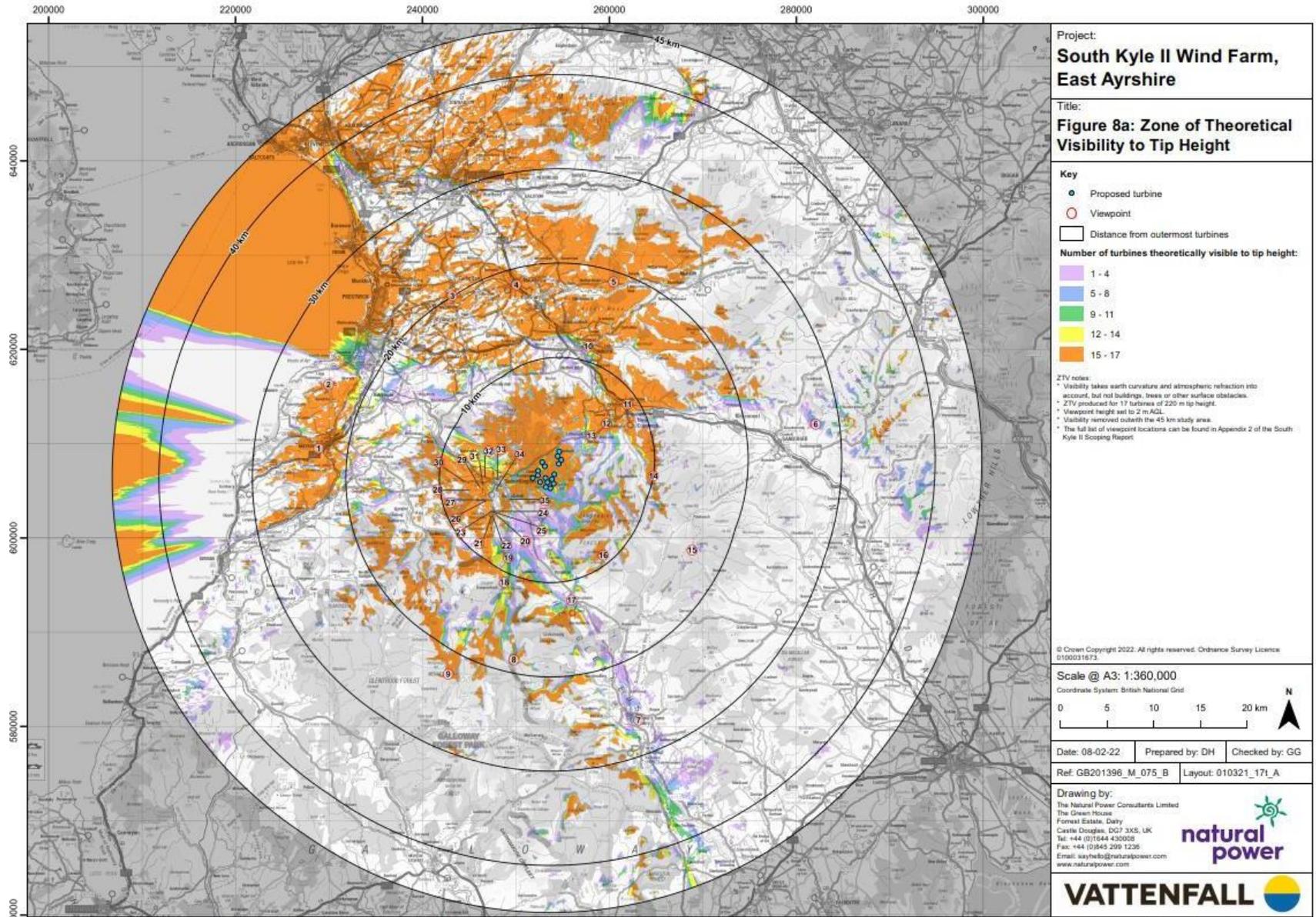
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## 6. Environmental Impact Assessment Report (EIAR) Chapters

Following the receipt of feedback on the detail within the Scoping Report, an EIAR will be produced. The EIAR will follow the below structure. The descriptions noted explain what each chapter aims to achieve and also notes any points of significance that are currently known and stated within the Scoping Report.

**Table 6.1: EIAR Structure**

Heading	Description
EIAR Chapter 1: Introduction	Presents the Proposed Development and provides a brief overview of the Applicant and the EIAR.
EIAR Chapter 2: Approach to EIA	Presents a methodology for environmental design and assessment of the proposed development through gathering baseline environmental data, mitigation of impacts during site design and final assessment of the significance of residual environmental and human effects of the proposal.
EIAR Chapter 3: Site Selection and Design Evolution	Explains the site selection and the design evolution process that has resulted in the Proposed Development.
EIAR Chapter 4: Project Description	Provides a detailed description of the infrastructure associated with the Proposed Development.
EIAR Chapter 5: Climate Change, Legislative and Policy Context	Identifies the energy and land use policies and outlines the need for the Proposed Development and its benefits within the context of international climate change agreements and European, UK and Scottish renewable energy policy. Includes analysis of the Proposed Development's carbon payback.
EIAR Chapter 6: Landscape and Visual Impact Assessment (LVIA)	Provides an assessment of the Landscape and Visual Impacts of the Proposed Development including Residential Visual Amenity and Night-time effects for the Proposed Development. It is acknowledged that any wind farm development would give rise to some significant landscape and visual effects due to the very nature and scale of the type of development. The greatest significant landscape and visual effects are likely to be experienced by landscape and visual receptors within a radius of less than 10 km of the Proposed Development, including landscape character, residential receptors of dwellings and settlements, recreational receptors, and visitors to the area. From high ground, in particular, there is potential for cumulative effects associated with other wind farms to be discussed at various stages within the planning process.
EIAR Chapter 7: Ecology and Biodiversity	Provides an assessment of the habitats and (non-avian) fauna present within the Proposed Development Area and immediate surrounding environment. The likely, effects during construction are disturbance and displacement to key receptors and potential loss or degradation of important supporting habitats. The likely effects during the operational phase are potential mortality from collision with wind turbines and operational displacement from/disturbance to important habitats. The potential for cumulative operational and construction related effects with other existing and Proposed Developments is also a likely, effect. The

Heading	Description
EIAR Chapter 8: Ornithology	<p>ecological features that shall be assessed in the EIAR will be habitats, otter, water vole, bats, badger, pine marten, red squirrel and fish/macro-invertebrates. Positive mitigation for all effects assesses will be detailed within the EIAR.</p> <p>Provides an assessment of the potential effects upon avian species. The likely effects during construction include potential disturbance and displacement to key receptors caused by presence of construction workers amongst other things and potential degradation of important habitats. Likely effects during the operational phase include potential mortality from collision with wind turbines and operational displacement from/disturbance to important habitats. In addition, the potential for cumulative construction and operational related effects with other existing and Proposed Developments is also likely. Existing baseline information has identified that the main ornithological constraints are likely to be hen harrier, goshawk, peregrine and snipe. In addition, relatively low numbers of wader species and black grouse have been recorded in the period between 1993 and 2021 in the area surrounding the Proposed Development. Positive mitigation to ensure the effect of the Proposed Development on these species is minimised will be detailed within the EIAR.</p>
EIAR Chapter 9: Hydrology, Geology & Hydrogeology	<p>Assesses the potential effects on the hydrological, geological and hydrogeological environment by the Proposed Development, including private water supplies and peat. Desk-based studies have identified six designated Sites of Specific Interest (SSSI) within 5km (Benbeoch, Bogton Loch, Dalmellington Moss, Dunaskin Glen, Loch Doon and Ness Glen) and a further one SSSI within 7km of the Proposed Development's site boundary (Nith Bridge). A Flood Risk assessment will be undertaken as well as a peat side risk assessment. Groundwater dependent terrestrial ecosystems will also require further assessment during the completion of the EIAR.</p>
EIAR Chapter 10: Noise	<p>Provides an assessment of the potential noise effects of the Proposed Development. Given the existing noise limits allocated to other schemes in the area, it is proposed that the 'Total ETSU-R-97 Noise Limits' (the formal calculation for permitted noise limits within an area) for the assessment will be based on a 40 dB noise limit during the daytime period and a 43 dB noise limit during the night-time period.</p>
EIAR Chapter 11: Population and Human Health	<p>Provides an assessment of the potential effects of the Proposed Development upon population and human health. Issues considered include shadow flicker, ice throw, lightning, private water supplies and socio-economics.</p>
EIAR Chapter 12: Cultural Heritage	<p>Provides an assessment of the potential effects of the Proposed Development upon cultural heritage assets. Initial assessment indicates that there are 13 cultural heritage sites within the Proposed Development Area. Suitable mitigation to ensure any effects from the Proposed Development are minimised will be proposed within the EIAR. This site does not appear to be</p>

Heading	Description
	archaeologically sensitive however this will be fully assessed in the EIAR.
EIAR Chapter 13: Traffic and Transport	Provides an indicative construction programme, load requirements and assesses the potential effects upon the transport network resulting from the Proposed Development. Anticipated impacts associated with the Proposed Development include amongst other things; temporary increase in movements of Heavy Goods Vehicles (HGVs), effects on sensitive receptors including residents and road widening to accommodate transportation.
EIAR Chapter 14: Existing Infrastructure and Aviation	Provides an assessment of the potential effects upon safety, aviation, Ministry of Defence (MoD) interests, communication operations and existing infrastructure.
EIAR Chapter 15: Forestry	Assesses how the Proposed Development will affect the existing plans for felling, restocking, and proposes suitable amendments to forestry design plan(s) to accommodate the Proposed Development. Initial desk-based assessment identifies no woodlands recorded in the Ancient Woodland Inventory (AWI) Scotland within the South Kyle commercial forests. Small areas of native woodland were recorded in the Native Woodland Survey of Scotland (NWSS) however overall, there are no woodland designations within close proximity to the Proposed Development Area.
EIAR Chapter 16: Synergistic effects, Summary of Mitigation and Residual Effects	Assesses the potential synergistic effects created by effects from different subject areas in combination and summarises the proposed mitigation and residual effects of all chapters of the Proposed Development.
Figures	EIAR Figures
Technical Appendices	Provides additional supporting documents and data which inform the EIA.
Non-Technical Summary	Provides a high-level summary of the EIA's results in terms that can be understood by a layperson.

## 7. Responding to the Scoping Report

All consultees are asked to respond to the Scoping Report or the Scoping Non-Technical Summary via the following email:

[Econsents\\_Admin@gov.scot](mailto:Econsents_Admin@gov.scot)

The Applicant will welcome such responses to inform the scope of EIA to be undertaken for the Proposed Development and further consultation to be undertaken with each consultee as the EIA progresses.

A summary of consultation questions as proposed throughout this scoping report is below. Please see the Scoping Report chapters where relevant for further context.

1. *Do consultees have any comments in relation to public consultation?*
2. *Do consultees have any comments in relation to the approach to the Environmental Impact Assessment?*
3. *Do consultees have any comments in relation to the proposed chapters to be included in the EIAR?*

4. *Do the consultees agree with the LVIA and CLVIA methodologies proposed?*
5. *Do the consultees agree with the suggested viewpoint locations and visualisations detailed in table 7.5?*
6. *Do consultees agree with the approach suggested for aviation lighting?*
7. *Do the consultees agree with the approach to the sequential assessment?*
8. *Are consultees satisfied with the coverage provided by the vantage point locations?*
9. *Is the proposed scope and extent of the available and proposed baseline data considered to be sufficient to inform a reliable assessment of the potential effects of the Proposed Development?*
10. *Are there any other key ornithological features that consultees believe should be considered that have not been discussed above?*
11. *Do consultees consider any Natura 2000 not discussed above as requiring consideration as part of screening for Appropriate Assessment?*
12. *Do consultees see value to any particular mitigation and/or enhancement measures for any local or regional species, whether referred to above or otherwise?*
13. *Is the proposed scope and extent of the available and proposed baseline data considered to be sufficient to inform a reliable assessment of the potential effects of the Proposed Development?*
14. *Are there any other key ecological features that consultees believe should be considered that have not been discussed above?*
15. *Do consultees consider any Natura 2000 not discussed above as requiring consideration as part of screening for Appropriate Assessment?*
16. *Do consultees see value to any particular mitigation and/or enhancement measures for any local or regional species, whether referred to above or otherwise?*
17. *Can the consultees confirm that they agree with the proposed assessment methodologies, specifically the user of ETSU-R-97 and the IOA GPG to assess operational noise and BS5228 to assess construction noise?*
18. *Can the consultees agree that assessment of vibration, low frequency noise and amplitude modulation be scoped out of EIA?*
19. *Do consultees agree with the proposed scope for shadow flicker?*
20. *Can Scottish Water confirm the presence of any public water supplies within the Site boundary or with potential hydrological connectivity to the site?*
21. *Do the consultees agree to scope out Lightning and Ice Throw from the EIA?*
22. *Do consultees agree with the proposed geographical extent of the assessment?*
23. *Do consultees agree that operational and decommissioning phases can be scoped out and the assessment will consider the effects during the construction phase only?*
24. *Can consultees provide traffic count data?*
25. *Do consultees agree that 'embedded mitigation' can be assumed in baseline assessment of receptors?*
26. *Do the consultees agree with the approach to consider the environmental impacts in line with IEMA thresholds of 30% and 10%?*
27. *Do the consultees agree with the traffic assessment approach set out in the above section?*
28. *Do consultees agree that the 'worst case scenario' be modelled or would a realistic 'most likely scenario' approach be more appropriate?*
29. *Do Transport Scotland agree that in relation to their Transport Assessment Guidance, no 'Transport Statement' or 'Transport Assessment' is required?*
30. *Are consultees content with the proposed methodology and scope for the forestry assessment?*
31. *Do the consultees have any information, particularly with reference to new guidance, which should be taken into account?*



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