

 **Fred. Olsen Renewables**



Natural Power acting as lead consultants
on behalf of Fred. Olsen Renewables.

Scawd Law Wind Farm

Volume 1: Non-Technical Summary

November 2022

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Glossary

Term	Definition
Environmental Impact Assessment	Environmental Impact Assessment (EIA) is a means of drawing together by the developer, in a systematic way, a description of the development and information relating to the likely significant environmental effects arising from a Proposed Development.
Environmental Impact Assessment Report	A document reporting the findings of the EIA and produced in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 Regulation 5.
The Applicant	Fred. Olsen Renewables Limited (FORL)
The Proposed Development	The proposed Scawd Law Wind Farm development
The Proposed Development Area	The development area within the red line boundary (application area) (refer to EIAR Figure 1.2 in Volume 3a)

List of Abbreviations

Abbreviation	Description
AIL	Abnormal Indivisible Loads
BT	British Telecom
CAA	Civil Aviation Authority
CO ₂	Carbon dioxide
CEMP	Construction Environment Management Plan
COP26	Conference of Parties Climate Summit
ECoW	Environmental Clerk of Works
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
GWDTE	Groundwater Dependent Terrestrial Ecosystems
HES	Historic Environment Scotland
HMP	Habitat Management Plan
IEMA	Institute of Environmental Management and Assessment
JRC	Joint Radio Company
LCT	Landscape Character Type
LDP	Local Development Plan
LVIA	Landscape and Visual Impact Assessment
MoD	Ministry of Defence
Natural Power	Natural Power Consultants Limited
NATS	National Air Traffic Services

Abbreviation	Description
Nm	Nanometres
NPF	National Planning Framework
NTS	Non - Technical Summary
NVIS	Night Vision Imaging Systems
PAC	Pre-Application Consultation
PPIP	Pollution Prevention and Incident Response Plan
SBC	Scottish Borders Council
SEPA	Scottish Environment Protection Agency
SLA	Special Landscape Areas
SPP	Scottish Planning Policy
SNH	Scottish Natural Heritage
TMP	Traffic Management Plan

1. Introduction

An application has been made by Fred. Olsen Renewables Ltd to Scottish Ministers under Section 36 of the Electricity Act 1989 and deemed planning under section 57(2) of the Town and Country Planning Act 1997 for consent to construct and operate Scawd Law Wind Farm. This Non-Technical Summary (NTS) has been produced in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended), hereafter referred to as the EIA Regulations). It accompanies an Environmental Impact Assessment Report (EIAR) which presents the results of the Environmental Impact Assessment (EIA) undertaken to establish the potential effects that the Proposed Development may create. As per Regulation 5(2)(e) of the Regulations, this NTS provides an NTS of the following:

- (a) a description of the development comprising information on the site, design, size and other relevant features of the development;*
- (b) a description of the likely significant effects of the development on the environment;*
- (c) a description of the features of the development and any measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;*
- (d) a description of the reasonable alternatives studied by the developer, which are relevant to the development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.*

1.1. The Applicant

FORL (hereby referred to as “The Applicant”) has been developing and operating wind farms since the mid 1990’s and is fully committed to the Scottish and UK renewable energy generation market, with an operational portfolio generating capacity of 529.7 MW. In the UK, The Applicant have a total of eight operational wind farms.

With over twenty-five years’ experience in consenting, developing and operating wind farms, The Applicant is one of very few developers that take a project all the way from initiation and development, through to operations.

The Applicant was the first developer to bring forward community benefit in Scotland. To date, the Applicant has made available over £6 million to eligible communities surrounding its wind farms and is substantially increasing this investment as new projects come online. The Applicant has committed to maximising opportunities for the local supply chain. This includes committing to ensuring that all main contractors will spend at least 30% of the contract value locally and incentivising all contractors to use local content.

In addition, two projects, Rothes I and Rothes II, contributed over £60 million to the Highlands & Islands economy, and £103 million to the Scottish economy alone to date.

The Applicant is a wholly owned subsidiary of Bonheur ASA and is responsible for the group’s renewable energy activities.

1.2. Consultants

The Natural Power Consultants Limited (Natural Power) has been appointed to coordinate and produce the EIAR and associated application documentation.

Natural Power 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 450 people working full time providing renewable energy services nationally and internationally. Natural Power's office in Stirling, where this project is largely managed, currently employs approximately 100 renewable energy experts.

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 (IEMA) 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.

Natural Power has also commissioned the following specialist consultants (Table 1.1) to provide professional advice for specific assessments in relation to the EIA of the Proposed Development.

Table 1.1: Specialist Consultants involved in the production of this Environmental Impact Assessment Report

CONSULTANTS		
LEGAL PLANNING AND POLICY CONSULTANTS		
David Bell Planning	David Bell Planning Ltd, 26 Alva Street, Edinburgh, EH2 4PY	Tel: 0131 259 6017 <i>Contact: David Bell</i>
Wright, Johnston & Mackenzie LLP	The Capital Building, 12/13 St. Andrew Square, Edinburgh, EH2 2AF	Tel: 0131 524 1500 <i>Contact: Nicola J Martin</i>
LANDSCAPE AND VISUAL		
Graeme Glencorse	Ochil House Springkerse Business Park Stirling FX7 7XE	Tel : 0734 156 8590
LVIA REVIEW AND PHOTOGRAPHY		
MVGLA Ltd	Cairndhu Dundas Street, Perthshire, PH6 2LN	Tel :01764 670 506 <i>Contact: Marc Van Grieken (technical reviewer)</i>
Tom Finnie	Tom Finnie Photography, 36 Stonehouse Road, Sandford, Strathaven, ML10 6PD	Tel: 0788 767 003 <i>Contact: Tom Finnie</i>
CULTURAL HERITAGE CONSULTANCY		
AMS Consultancy	York Hub, Popeshead Court Offices, Peter Lane,	Tel: 01904 404849 <i>Contact: Steve Lancaster</i>

CONSULTANTS

York,
YO1 8SU

NOISE CONSULTANCY

Hayes McKenzie Partnership Ltd	Unit 3, Oakridge Office Park, Whaddon, Salisbury, Wiltshire, SP5 3HT	Tel: 01722 710 091 <i>Contact: Rob Shepherd</i>
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SOCIOECONOMICS AND TOURISM

Stantec Inc	5 th Floor, Lomond House, 9 George Square, Glasgow, G2 1DY	Tel: 0141 343 3319 <i>Contact: Mark Johnston</i>
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AVIATION

Aviatica Group Ltd	Reservoir House, Gladhouse, Midlothian, EH23 4TA	Tel: 07710447378 <i>Contact: Malcolm Spaven</i>
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2. Environmental Impact Assessment Report

The EIAR has been prepared in line with the EIA Regulations. The EIAR reports the findings made in the EIA of the Proposed Development. The scope of the EIA was the subject of a formal scoping opinion from the Scottish Government Energy Consents Unit on behalf of Scottish Ministers. This included input from the Local Planning Authority, which is Scottish Borders Council, and from other consultees including Scottish Environment Protection Agency (SEPA), NatureScot (formerly known as Scottish Natural Heritage (SNH)) and Historic Environment Scotland (HES). A scoping opinion was sought from Scottish Ministers in October 2020.

During the EIA process, site visits, surveys and desktop assessments, in line with relevant guidance, were carried out to ascertain the potential impacts of the Proposed Development on the environment and mitigation measures to be made. A review of planning and other relevant policies was also made to inform the assessment process and ensure the Proposed Development adequately considered local and national policy. The EIAR has been prepared in accordance with the EIA Regulations and follows the structure presented in Table 2.1 below. Where relevant each EIAR chapter considers the baseline environment, the likely significant effects for each phase of the development, any required mitigation and cumulative impacts.

Table 2.1: EIAR Structure

Volume	Heading	Description
1	Non-Technical Summary	Provides a high-level summary of the EIA's results in terms that can be understood by a layperson.
2	EIAR Chapter 1: Introduction	Presents the Proposed Development and provides a brief overview of the Applicant and the EIAR.
2	EIAR Chapter 2: Policy Context	Identifies the energy and land use policy and outlines the need for the Proposed Development and its benefits within the context of international climate change agreements and UK and Scottish renewable energy policy.
2	EIAR Chapter 3: Site Selection and Design Evolution	Provides a detailed description of the site selection process for the proposed site. This chapter also discusses the design evolution process and mitigation measures that were introduced at the site selection and design stage to reduce environmental impacts from the beginning.
2	EIAR Chapter 4: Project Description	Provides a detailed description of the Proposed Development including details of the construction, operational and decommissioning arrangements.
2	EIAR Chapter 5: Approach to EIAR	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.
2	EIAR Chapter 6: Landscape and Visual	Provides the Landscape and Visual Impact Assessment (LVIA) of the Proposed Development and cumulative LVIA.

2	EIAR Chapter 7: Ecology	Provides an overview of the baseline ecological conditions relating to the habitats and (non-bird) animals present within the Proposed Development area and immediate surrounding environment.
2	EIAR Chapter 8: Ornithology	Describes the ornithological (bird) interest at the Proposed Development and assesses the predicted effects on these interests.
2	EIAR Chapter 9: Hydrology, Geology and Hydrogeology	Assesses the impacts on the hydrological, geological and hydrogeological environment at the Proposed Development including private water supplies and peat. An associated technical appendix (in Volume 4) includes analysis of the Proposed Development's carbon payback.
2	EIAR Chapter 10: Cultural Heritage	Considers the potential impacts of the Proposed Development upon cultural heritage assets.
2	EIAR Chapter 11: Noise	Assesses the potential noise effects of the Proposed Development.
2	EIAR Chapter 12: Traffic and Transport	Assesses the effects due to transport and access resulting from the construction, operation and decommissioning of the Proposed Development.
2	EIAR Chapter 13: Socio-economics, Tourism and Recreation	Assesses the predicted socioeconomic and tourism impacts of the Proposed Development on local, regional and national levels.
2	EIAR Chapter 14: Aviation and Other Matters	Assesses the potential impact on aviation, Ministry of Defence interests, communication operations and any existing site infrastructure. This chapter also considers Public Access, Shadow Flicker, Ice Throw and telecommunications links.
2	EIAR Chapter 15: Synergistic Effects and Summary of Mitigation and Residual Effects	Summarises the findings of the EIA presented in the EIAR chapters described above. This chapter also includes synergistic effects and a summary of all the mitigations presented.
3a	Figures	EIAR Figures except Landscape & Visual
3b	Figures	EIAR Landscape & Visual Figures & Visualisations and Cultural Heritage Visualisations.
4	Technical Appendices	Provides additional supporting documents and data which inform the EIA.

The application is also supplemented by an accompanying Planning Statement and a Pre-Application Consultation (PAC) Report.

Copies of the full EIAR and NTS can be obtained from the Applicant through Julie.aitken@fredolsen.com:

- NTS in printed form FREE

- EIAR in printed form £1,250
- EIAR in PDF file format on CD or Memory Stick £15

An electronic copy (accessible free of charge) of the EIAR can also be found on the Fred. Olsen Renewables website: <https://fredolsenrenewables.com/windfarm-collection/united-kingdom/scawd-law/>

3. Overview of the Proposed Development

The Proposed Development is located to the north-east of Innerleithen, approximately 3 km to the east of the B709 and some 4 km north of the A72. The Proposed Development lies along the top of two ridges, lying between 500 m and 640 m above sea level; with steep slopes to the south, leading down to small water courses that drain south towards the River Tweed, some of which are located within the Proposed Development Area (Figure 1.2: Site Layout, Volume 3a). Habitat is considered typical of this area, comprising a mix of heather moorland and rough, semi-improved grassland, with extensive plantation forestry situated c.1 km to the south and west. The land is currently used for sheep farming, and the estate also release birds (pheasant *Phasianus colchicus* and red-legged partridge *Alectoris rufa*) for game shooting.

The Proposed Development is expected to be up to 48 MW in wind generation and up to 12 MW of battery energy storage and includes the following elements:

- Turbine infrastructure for up to eight turbines including, turbine foundations; external transformer housing; crane pads and hardstand areas;
- Micro-siting allowance of turbines and associated infrastructure of up to 75 m;
- Substation, control building and compound;
- Battery/energy storage infrastructure;
- Construction of approximately 6.8 km of new access tracks;
- Alterations to the public road network;
- Underground electricity cables;
- Anemometry mast;
- Signage;
- One temporary borrow pit;
- Temporary concrete batching plant;
- Temporary construction and storage compounds, laydown areas and ancillary infrastructure;
- One minor water crossing between T3 and T6 (a peat drain from the acrotelm (one layer in an undisturbed peat bog) and not a major water crossing); and
- Drainage and drainage attenuation measures (as required).

Any public road to the site entrance may be utilised by vehicles associated with the Proposed Development, except Abnormal Indivisible Loads (AIL) which have a set access route (see Chapter 12: Traffic and Transport) subject to upgrades where necessary.

A Habitat Management Plan (HMP) has been proposed, with the aim of improving and restoring areas of modified and damaged bog habitats in the local area as well as improving riparian habitat within the Proposed Development Area.

It is intended that multi-use trails will be applied for as a separate consent within the Proposed Development Area. The trails and their predicted impacts on tourism and the local economy are detailed in Appendix 13.3. To secure the delivery of multi-use trails a Memorandum of Understanding will be signed with a community group.

The Proposed Development is expected to have an operational life of up to 35 years. For the purpose of assessment, the Applicant has considered turbines with a maximum base to tip height not exceeding 180 m. Figure 1.2 of the EIAR illustrates the Proposed Development's site layout.

Locations (subject to micro siting) and indicative dimensions of the proposed turbines are shown in table 3.1.

Table 3.1 Indicative Turbine details and co-ordinates

Turbine Number	Easting	Northing	Maximum Tip Height (m)
1	336020	640609	180
2	335901	640940	180
3	335793	641399	180
4	336495	641194	180
5	336756	640856	180
6	336191	641911	180
7	336633	642429	180
8	337184	643040	180

Source: Natural Power

The information in this section of the NTS satisfies the requirement of Regulation 5(2)(a) of the EIA Regulations. A more detailed description of the Proposed Development is provided in Chapter 4 of the EIAR.

4. Reasonable Alternatives

The Applicant is engaged in a continual search and assessment of potential wind farm sites throughout the UK to progress and develop into wind farm applications. This search began in the mid 1990's and the process has yielded a number of sites which have progressed to operational wind farms.

The Applicant's site search process uses rigorous selection involving constraints mapping, site visits and continual review of technical, environmental and planning considerations. Several sites were considered at the initial stages of the site search, but the majority of these were discarded due to constraints on or in close proximity.

The overarching aim of the selection process was to achieve a layout that maximised the efficiency of the Proposed Development whilst limiting the potential environmental impacts. Factors influencing the suitability of the site included:

- Suitable wind speeds and quality of wind flow to optimise generation outputs;
- Suitable separation distance from dwellings and settlements;
- Reasonably close proximity to a viable grid connection;
- Proximity to sensitive landscape and visual receptors;
- Willing landowner(s);
- Potential to use existing infrastructure, as far as practical;
- A feasibility route for transporting components to site by the public road network;
- Suitable land area to accommodate generating capacity and civil engineering requirements; and
- No significant environmental constraints preventing development.

The results indicated that this site would be a technically and environmentally appropriate location to develop a wind farm.

4.1. Site Design

Environmental survey of Scawd Law, for example birds and other species, peat depth, archaeology and other matters of interest, ran over a period from 2018 – 2021. The data gathered enabled the team to investigate five different design iterations before settling on the final design which maximises the efficiency of the Proposed Development whilst limiting the potential environmental impacts. The Proposed Development Area has also been assessed by checking it against a number of strategic constraints. Image 1 (Figure 1.2 of the EIAR) illustrates the site location and layout of the Proposed Development Area, presented below.

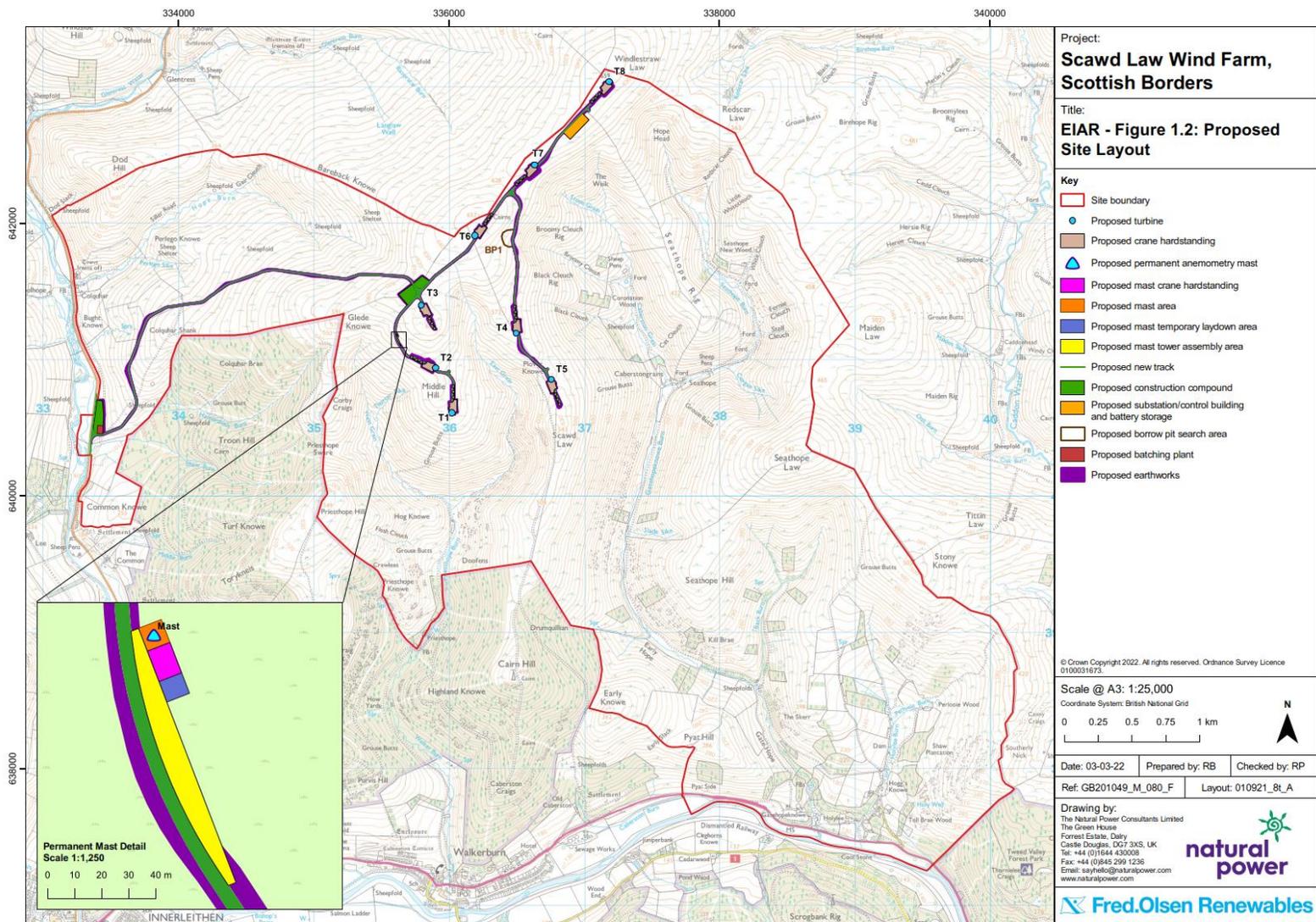


Image 1: Site layout, reproduced from Figure 1.2: Site Layout in Volume 3a of the EIA.

The Proposed Development has been in the design process for a considerable time and the layout has evolved iteratively, including responding to issues raised during and after Scoping, having considered different numbers and sizes of turbines; see Chapter 3 of the EIAR for full details. Such changes have been influenced by several factors including economics, stakeholder feedback, planning policy and potential environmental effects.

Image 2 illustrates the iterative turbine layout evolution. Before Scoping, many design options were presented with both positive and negative attributes including the worst-case scenario of an 18-turbine development which was assessed in the Initial Feasibility Assessment. This layout was likely to provide the most benefit in terms of electricity generation, climate mitigation, supply chain and community benefit (£ per MW) but due the proximity of the Proposed Development to the central area of the Borders and the Tweed Valley and the consequential visual impact, the local authority's formal response to the pre-application claimed that an 18-turbine development could not receive support. After additional extensive survey work and further turbine layout reviews (including a 15-turbine layout), a 12-turbine layout was produced before proceeding to formal Scoping in 2020.

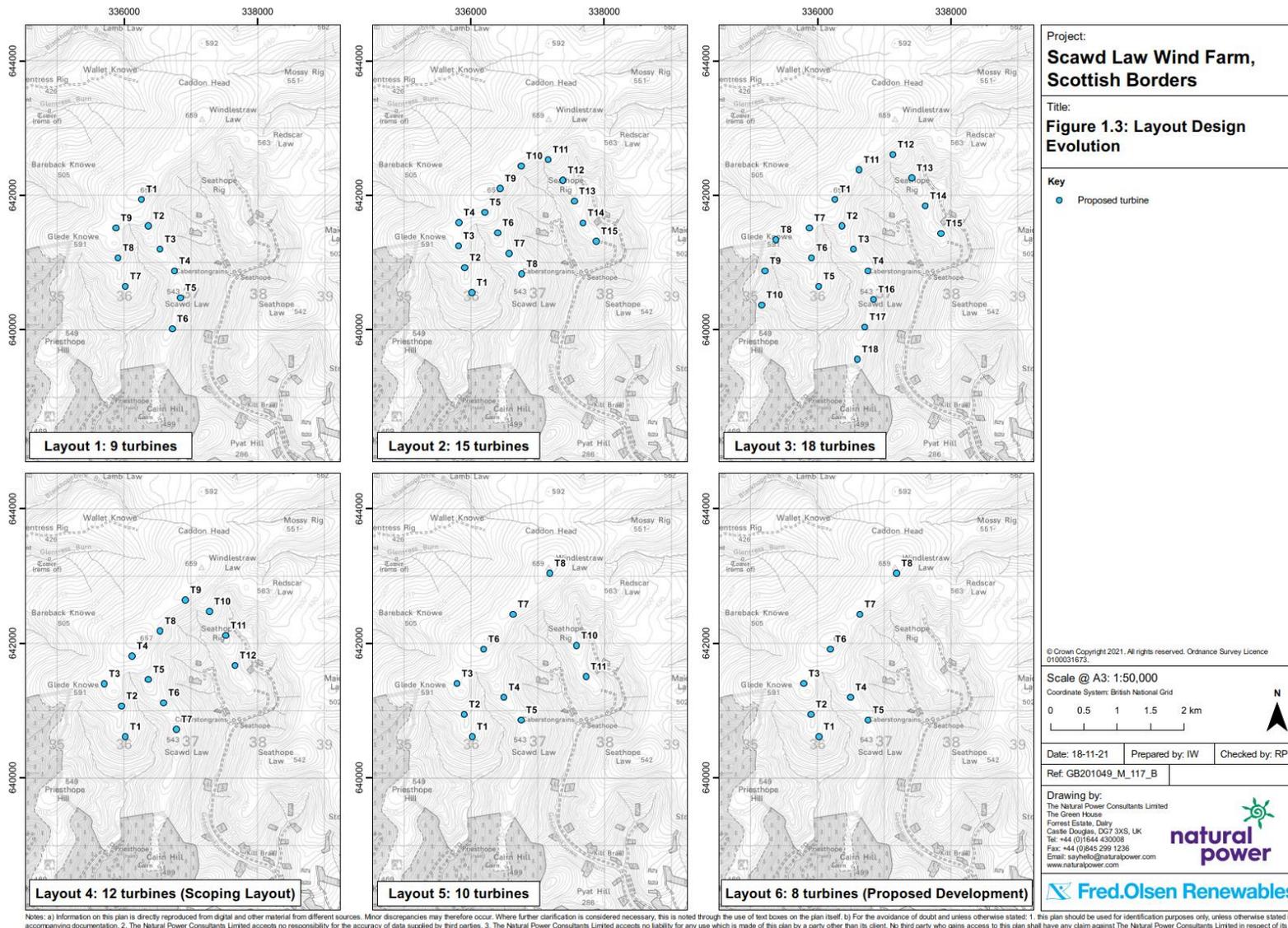


Image 2: Layout design evolution, reproduced from Figure 1.3: Layout Design Evolution in Volume 3a of the EIAR

Continuing the design and consultation process after a scoping opinion was received, the number of turbines further decreased from 12 to 8 with a blade tip height of up to 180 m, balancing the various site constraints and feedback with the scale of development required to be economically viable. The design evolution of the site from 18 to 8 turbines is presented in Image 2.

Image 1 contains a detailed final site turbine layout with associated infrastructure for the Proposed Development after design freeze. The EIAR outlines in extensive detail how environmental matters and stakeholder feedback have influenced the process, however particularly prominent issues which affected the design include:

- Reducing potential landscape and visual effects by removing turbines, in particular to avoid encroaching into the central area of the borders and the heavily used Tweed Valley;
- Reducing required engineering works on site for build-out by removing turbines on the far east side of the Proposed Development Area;
- Avoiding areas of deepest peat, especially over 1 m in depth;
- Reducing impacts on plant and animal species, including sensitive receptors like blanket bog habitats and black grouse, among others;
- Protecting archaeological and cultural heritage features;
- Adapting the design to bring the wind farm within cumulative noise limits;
- Minimise impacts on watercourses and the aquatic environment;
- Consider the safety implications of the access junction.

4.2. Planning Policy

Design Consideration

According to Scottish Planning Policy criteria, the Proposed Development is located mostly in an 'Area with Potential for Wind Farm Development' (Scottish Planning Policy (SPP) Group 3). In addition, Local Development Plan (LDP) policy EP5: Special Landscape Areas (SLA) protects against visual impact of development in certain sensitive areas of the Tweed Valley. This was considered in the design process and turbines were removed to limit visual impact to this region. Therefore, the Proposed Development has strategic support in this regard from SPP.

Policy Context

International climate policy

Nations including the UK signed the Paris Agreement in April 2016 to make the global plan to limit global warming below 2°C legally binding and entered into force in November 2016. In addition to the target of keeping global warming below 2°C of pre-industrial levels, there is a commitment to pursue efforts to limit the temperature increase to 1.5°C. The UK hosted the UN's Conference of Parties climate summit ('COP26') summit in November 2021 which was an opportunity to demonstrate the UK's climate leadership and provide clear milestones for the next steps in the UK's emission targets climate adaptations, as well as to push forward international commitments.

COP26 finalised the Paris agreement with nearly 200 countries agreeing to the 'Glasgow Climate Pact', which committed to the 1.5°C target and resolved a number of important outstanding elements of the Paris Agreement.

Domestic climate policy

The Scottish Government is a devolved administration and is responsible for climate change and energy issues in Scotland. In line with the UK's agreement with the Kyoto Protocol and the Paris Agreement, the Scottish Government brought into force:

- The Climate Change (Scotland) Act 2009;
- The Scottish Energy Strategy 2017; and
- The Scottish Onshore Wind Energy Policy Statement 2017.

The Scottish Energy Strategy includes the aim to meet 50% of Scotland's whole energy demand from renewables by 2030.

The document outlines a vision to drive Scottish Energy Production for 2050 and stresses the importance of renewable energy in achieving a low carbon economy in Scotland.

More explicitly the Scottish Onshore Wind Energy Policy Statement sets out the role of onshore wind in meeting these targets. The Scottish Onshore Wind Policy Statement is being reassessed at present and undergoing consultation to update and produce a draft in 2022.

Since the publication of these landmark documents, considerable additional weight has been afforded to the matters raised by them through the publication of amongst other things:

- The Climate Change Plan 2018 (and 2020 update);
- The Climate Change (Emission Reductions Targets) (Scotland) Act 2019 setting the target for net zero carbon emissions by 2045;
- Net Zero – The UK's Contribution to Stopping Global Warming 2019;
- Climate Emergency: Scotland;
- Reducing emissions in Scotland Progress Report to Parliament Committee on Climate Change October 2020;
- Protecting Scotland, Renewing Scotland: The Government's Programme for Scotland 2020-2021; and
- The Sixth Carbon Budget, Climate Change Committee, December 2020.

In August 2021, The Scottish Government and the Scottish Green Party Parliamentary Group created a shared draft policy programme – the Bute House Agreement – that would see the parties working together to achieve objectives relating to the climate emergency over the next five years. It details commitments to investing at least £1.8 billion over this period in energy efficiency and renewable heating and creating a bigger focus on green jobs. These documents are the main drivers in steering Scotland towards a low-carbon economy and meeting international targets on climate change and renewable energy generation.

Planning Policy

The Planning etc. (Scotland) Act 2006 amended the 1997 Act to put National Planning Framework (NPF) on a statutory footing. The current edition, the third edition ('NPF3'), was published in June 2014¹. It sets out a strategy for Scotland's development over the next 20 to 30 years, providing a national context for development plans and planning decisions, to inform wider programmes of government, public agencies, and local authorities.

¹ Available at <http://www.gov.scot/Resource/0045/00453683.pdf> (last accessed 26/01/2022)

NPF3 confirms the importance of renewable energy to Scotland's energy mix and highlights upgrades to the electricity transmission system infrastructure that are needed to facilitate this development. The vision for Scotland portrayed in NPF3 is that of a successful, sustainable place, a low-carbon place, a natural resilient place and a connected place. These visions put emphasis on the aspirations of Scotland being a leader in low-carbon energy generation, both onshore and offshore, to create a more energy efficient economy with fewer greenhouse gas emissions. The target is to generate the equivalent of Scotland's gross annual electricity consumption from renewable sources by 2020. The 2015 target of 50% was exceeded and recent data has stated that renewable electricity generation has risen from 90% in 2019 and is now equivalent to approximately 97% of Scotland's gross electricity consumption in 2020².

The Scottish Government published the draft National Planning Framework on the 10th November 2021 and laid it before Parliament at the same time to allow the consultation process and the Parliamentary process to run together.

The draft NPF4 will supersede NPF3 and SPP and Part 3 – National Planning Policy will become part of the statutory development plan.

The planning policy overview provided above is therefore subject to the adoption of the final NPF4, which is expected in early 2023, and the applicant proposes to update the policy position and submit an updated Planning Statement to do so at the appropriate time as part of this application.

Finally, Scottish Borders Local Development Plan policy ED9 aims to support renewable energy and reference is also made to the wider national level policy context in terms of achieving renewable energy and electricity targets.

4.3. Wind Resource

Wind speed measurements using temporary anemometer masts have been recorded for the Proposed Development. With the relatively high wind speeds recorded, the Applicant is confident that the Proposed Development can generate renewable electricity at this site on an economically viable basis.

Load factors are a ratio used in the electricity industry to express the actual electrical output of a power plant compared to its theoretical maximum over a given period (typically a year) and is used to make comparisons of the relative efficiencies of different facets of the same technology (e.g. location or turbine model for onshore wind) or comparing different types of power generating technology.

4.4. Grid Connection

The wind farm must be connected to the National Grid network in order to deliver generated electricity where it is needed. The intended connection point for the Proposed Development is at Galashiels, located approximately 15 km east from the Proposed Development.

The connection itself will be subject to a separate planning application and environmental impact assessment, to be undertaken by the network operator. This connection date is intended for 2028.

4.5. Summary

The Proposed Development has been located in a suitable area for wind farm development following a site selection process. The rigorous design evolution has taken place over several years through many changes which have reacted to environmental data gathered on the site, new policies, market dynamics and consultee

² Available at <https://www.scottishrenewables.com/our-industry/statistics> (last accessed 26/02/2022)

responses. Through balancing the various site constraints with the scale of development required to be economically viable, the Applicant believes that the Proposed Development provides optimum use of the Proposed Development Area with respect to the potential renewable electricity generating capacity balanced against the potential environmental and other effects.

This section of the NTS has addressed the requirement of Regulation 5(2)(d) of the EIA Regulations in considering reasonable alternatives.

5. Potential Effects and Mitigation

This section of the NTS presents the potential significant effects of the Proposed Development and the measures taken or put forward to reduce the potential significant effects identified (mitigation). In doing so, it addresses Regulation 5(2)(b) and 5 (2)(c) of the EIA Regulations.

5.1. Access (public road)

Most traffic related to the Proposed Development will be cars, vans and lorries which are suitable for use on the existing road network. Large turbine components, however, need to be delivered as an AIL which is any load that cannot be broken down into smaller loads for transport, in particular the blades of the wind turbine. Extra-large lorries must be used for these AIL deliveries and extensive assessment work is done on the proposed AIL delivery route to ensure that they can make all the turns and identify any road upgrades or alterations which might be needed.

It is likely that the turbine infrastructure will be delivered from Grangemouth Port and join the M9 motorway heading south (see Figure 12.2: Proposed AIL Route, Volume 3a reproduced in Image 3). The Proposed Development's primary option for AIL access to the Proposed Development Area is from the existing B709 near Colquhar which leaves the B7007 near Garvald Lodge. These roads will be utilised and upgraded where necessary. An assessment of the public road access is provided in Chapter 12: Traffic and Transport of the EIAR.

Upon leaving the B709, the primary option for access to the Proposed Development is through the new site entrance located at Colquhar (Image 3).

A Traffic Management Plan (TMP) will be approved by the local planning authorities in consultation with Transport Scotland and Roads Authority and police prior to construction starting on the Proposed Development. This will detail any temporary changes to road furniture, timings of deliveries and the construction routes to minimise its impact on the road network. A Preliminary TMP is provided in Technical Appendix 12.2 of the EIAR in Volume 4.

The assessment of potential effects upon traffic and transport is provided in Chapter 12 of the EIAR. It concludes that, with the incorporation of suitable mitigation measures secured through a construction TMP, there will be no significant traffic effects associated with the Proposed Development. If the construction of the Proposed Development coincided with another wind farm, using the same transport routes, then communication with the other developer(s) would take place with the aim to mitigate any effects to a non-significant level.

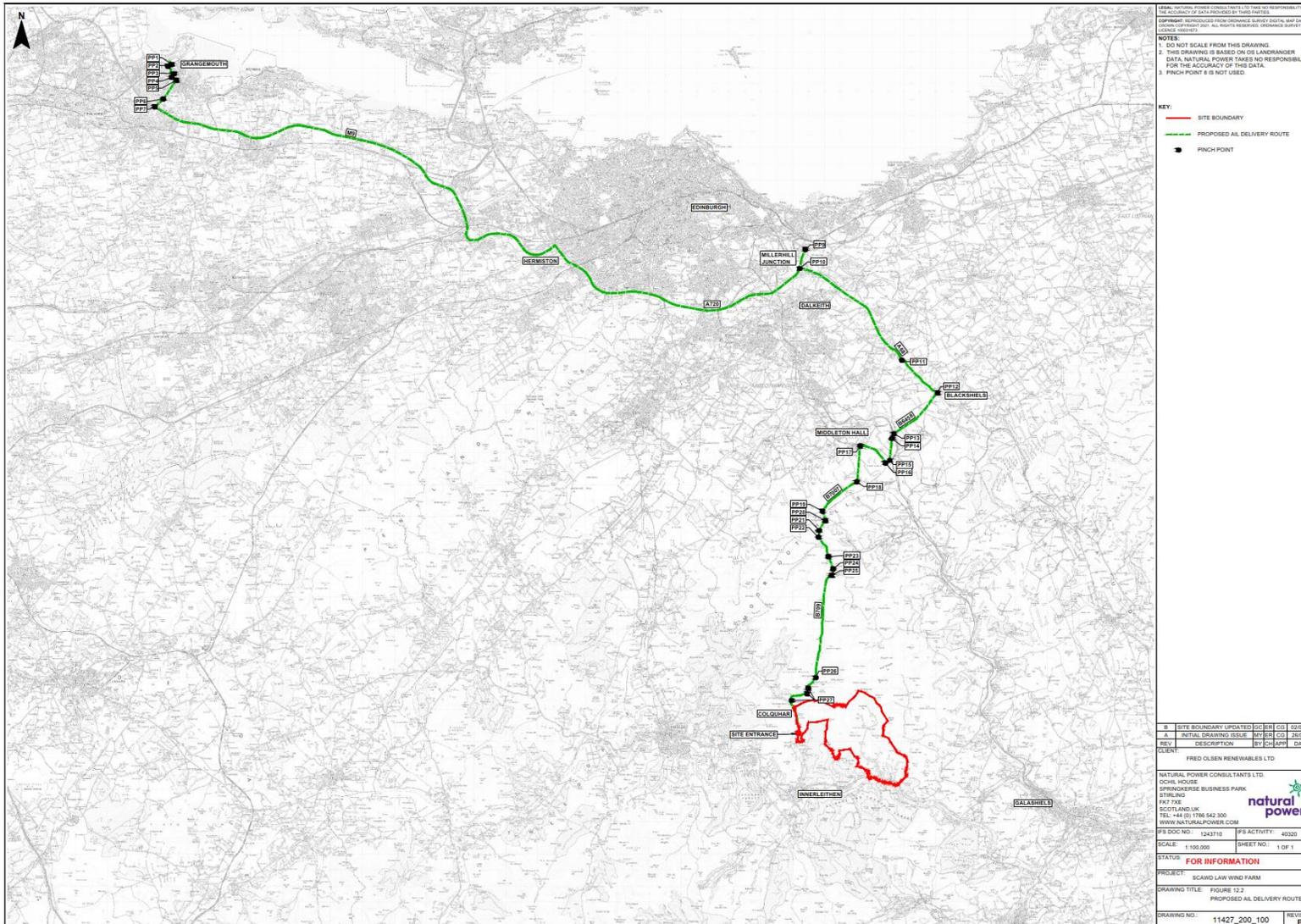


Image 3: Abnormal indivisible load route, reproduced from Figure 12.2: Proposed Abnormal Indivisible Load Delivery Route in Volume 3a of the EIAR

5.2. Landscape and Visual

Landscape and visual considerations were taken on board at an early stage of the project as these were understood to be key to project progression. Chapter 6: Landscape and Visual considers these impacts. Whilst it is noted that opinion on wind farms and their visual effects varies and is subjective, for the purposes of assessment it has been assumed all visual impacts are negative.

During the design process, views from residential and sensitive visual receptors, including the Tweed valley between Peebles and Innerleithen and the uplands located to the south, were key design considerations and turbines were positioned further back from these sensitive receptors. Furthermore, due to the containment by the surrounding uplands, significant landscape effects would be restricted to the landscape within 8 km of the Proposed Development where the perceptual change to key characteristics would be experienced.

Of the six residential properties assessed, four are predicted to receive a significant effect. However, none were identified as receiving an effect to the extent that the Proposed Development would be overbearing. These key considerations are vital in ensuring the Proposed Development will not alter the area such that it becomes an unpleasant place to reside.

Consideration was also given to other wind farm sites in the surrounding area to determine cumulative impact on landscape. Establishing a sufficient gap from other wind farms was a factor to prevent amalgamation with other nearby sites. Cumulative effects would arise mainly from the addition of the Proposed Development in combination with the Greystone Knowe (Scenario 3) development which would increase the concentration of turbines in the Dissected Plateau Moorland Landscape Character Type. However, this part of the Moorfoot Plateau Unit is already influenced by operational wind farms in the surrounding landscape and therefore the addition of the Proposed Development to this baseline would lead to further intervisibility of wind farms in the south of the unit which is currently unaffected. Furthermore, due to the rolling nature of landform, there would be limited areas within the unit where both developments would be experienced together. Ensuring the Proposed Development reads in harmony with existing or proposed developments in the area is fundamental considering the potential landscape and visual effects.

Many elements of infrastructure, including the temporary construction compound, substation, control building, and energy storage, have been located to avoid proximity to residential receptors and to avoid ridgelines, steep slopes and large areas of cut and fill as much as possible. These temporary construction-related effects are also subject to reinstatement to remove the most detrimental aspects of impact.

Chapter 6 considers the Proposed Development's residual effects from the operational phase following the mitigation measures which have been incorporated during the design of the proposed layout. Snapshots of the visualisations produced to illustrate the Proposed Development are reproduced below in Images 4, 5 and 6. The full figures and visualisations which should be referred to for assessment purposes are provided in Volume 3b of the EIA



Image 4: Viewpoint 8: Lee Pen, reproduced from Figure 6.24f in Volume 3b of the EIAR.



Image 5: Viewpoint 11: Innerleithen Carpark, reproduced from Figure 6.27f in Volume 3b of the EIAR.



Image 6: Viewpoint 23: Blake Muir, reproduced from Figure 6.39f in Volume 3b of the EIAR.

Table 5.2.1 Potentially Significant Landscape and Visual Effects

Impact upon:	Potentially Significant Effect
Landscape Character	Localised significant effects on 3 of the 59 Landscape Character Types (LCTs) identified within 45 km. This is due to direct effects upon one LCT and indirect effects in proximity to the Proposed Development extending to 8 km from the outermost turbines.
Landscape Designations	The Proposed Development would not be located in any national or local designations but would lead to significant effects on 2 of the 127 protected and designated landscapes identified within the 45 km study area. This would be due to the extent of visibility at distances of 12.4 km for a very high sensitivity receptor and at 15 km where proposed turbines would be experienced in an area currently unaffected.
Residential Receptors	Six residential receptor properties were identified and assessed within 3 km from the Proposed Development. Two of these are located within the Proposed Development Area and are financially involved. Of the six residential properties assessed, four are predicted to receive a significant effect however, this would not be overbearing or result in the property considered an unpleasant or unattractive place to live. This would be due to a combination of screening by vegetation, and intervening woodland, as well as extent of view affected.
Sequential Routes	Five of the 12 route receptors assessed within 5 km of the Proposed Development were predicted to receive a significant effect including a minor road on the southern bank of the River Tweed, Southern Upland Way, Cross Border Drove Road and Core Paths No. 161 & 163.

Source: EIA Chapter 6: Landscape and Visual

Chapter 6 of the EIA should be referred to for full detailed assessment of each receptor. It concludes that there would be **several significant effects to both landscape and visual receptors but these be relatively contained within the surrounding landscape of the Tweed Valley and uplands located to the south. Due to this containment by the surrounding uplands, significant landscape effects would be restricted to the landscape within 8 km of the Proposed Development where the perceptual change to key characteristics would be experienced. Within the wider area, it is not predicted that significant effects would occur to landscape and visual receptors due to a combination of screening from landform, vegetation and intervening woodland.** The potential significant effects identified are restricted to landscape and visual effects upon a limited number of receptors within close proximity of the Proposed Development. Images 4, 5 and 6 present snapshots of photomontages produced to illustrate the Proposed Development.

5.3. Ecology and Ornithology

Extensive surveys over multiple years have been conducted on the site to thoroughly categorise and record the flora (plants) and fauna (animals) on the site. Particular care has been taken to record any sensitive species and habitats present.

The Proposed Development is **not predicted to have significant effects** on any important ecological and ornithological receptors during any of the phases of the Proposed Development life cycle. Assessments of the relevant potential effects upon ecology and ornithology are detailed in Chapter 7 and 8 respectively.

Despite the absence of significant effects, a HMP is proposed with the aim of restricting livestock grazing for habitat regeneration, riparian and other broad-leaved planting which promotes an increase in biodiversity and/or flood protection within the Proposed Development Area. In addition, it is proposed that financial support is provided to suitable local bog restoration projects with the aim restoring degraded bog habitat in the surrounding area. The creation of site-specific Construction Environment Management Plan (CEMP) and appointing an Environmental Clerk of Works (ECoW) will be carried out to monitor adherence to plans

5.4. Hydrology, Geology and Hydrogeology

Rock types, water courses, and groundwater dependent terrestrial ecosystems (GWDTE) were categorised and recorded during the EIA process.

Scottish Water, Scottish Borders Council (SBC), SEPA and other engaged stakeholders have been consulted during the EIA and their guidance used in designing the layout to protect watercourses from disturbance and potential effects on water quality during construction and operation. Good practice during construction, adherence to a site-specific CEMP, a Drainage Management Plan and a Pollution Prevention and Incident Response Plan (PPIP) as well as the appointment of an ECoW have been considered as embedded mitigation and as such **no significant effects** are assessed to result. A detailed assessment of hydrological elements is provided in Chapter 9 of the EIAR.

5.5. Cultural Heritage

Cultural heritage is the legacy of tangible and intangible heritage assets that is inherited from past generations and therefore is important to be conserved. These include Scheduled Monuments and heritage assets in the HES records. Baseline survey work indicated the Proposed Development has several features of cultural heritage importance. The landscape of the Proposed Development and the immediately surrounding area contains many post-medieval and modern agricultural heritage assets and a smaller number of medieval and prehistoric assets, set variously in moorland, pasture and conifer forestry. The potential of unknown assets dating from these periods is considered to vary between low (Roman, modern), low to moderate (prehistoric, medieval) and moderate (post-medieval).

There are no predicted significant effects or significant effects on the setting of heritage assets arising from the construction or operation of the Proposed Development. The development therefore does not significantly adversely affect the fabric or setting of any Listed Buildings, the integrity of the setting of any Scheduled Monuments or the setting of any Gardens and Designed Landscapes.

A full assessment of cultural heritage is provided in Chapter 10 of the EIAR. It concludes that there **will be no predicted significant effects** on cultural heritage assets. Mitigation would be embedded into the design of the Proposed Development. In addition, fencing off assets and a watching brief, agreed with Scottish Borders Council Archaeology Service, on the elements of the ground works that may have a direct impact on heritage assets would be carried out during construction. The mitigation programme would be documented in an agreed Written Scheme of Investigation.

5.6. Noise

The potential effects upon noise are assessed in Chapter 11 of the EIAR. An operational noise assessment has been undertaken by comparing predicted noise levels for a candidate turbine, based on the indicative dimensions of turbines proposed, for the Proposed Development with the noise limits derived from baseline noise measurements carried out at a number of properties in the vicinity of the Proposed Development.

Predicted noise levels are below the noise limits under all wind speed and wind direction conditions, and therefore the operational noise impacts are **not significant**.

No significant impacts are predicted for road traffic noise generated by construction traffic accessing the site during the construction and decommissioning phase of the Proposed Development. The noise assessment was undertaken with reference to noise limits set out in the code of practice for noise and vibration control on construction and open sites (BS 5288).

The predicted noise increase from construction traffic was monitored at receptor locations along the A72 and at properties along B7007 and B709 where the predicted increase in road traffic noise level was less than 0.5 dB and up to 3 dB respectively. Therefore, the impact is considered to be **not significant**.

The nearest wind farms are sufficiently distant such that noise from other wind farms is more than 10 db below the Assessment & Rating of Noise from Wind Farms (ETSU-R-97) simplified noise limit and therefore does not add significantly to noise from the Proposed Development. Cumulative operational noise levels would not exceed the relevant noise limits and therefore a cumulative noise assessment was not required.

5.7. Aviation

The potential effects upon aviation are assessed in Chapter 14 of the EIAR.

The Civil Aviation Authority (CAA) requires any structure equal to and taller than 150 m in height to be fitted with visible aviation warning lighting. Infra-red lighting will be fitted to all turbines in the Proposed Development to enable aircrew using Night Vision Imaging Systems (NVIS) to see and avoid them at night. To assist non-NVIS-equipped aircraft, medium intensity steady red lights will also be fitted to all turbines in the Proposed Development. These will be dimmed in clear sky conditions.

Under the usual planning conditions expected in the consent, if granted, the Ministry of Defence (MoD) would be informed of the dates of commencement, completion, final turbine locations and heights.

A radar Mitigation Scheme will be agreed by the Applicant and National Air Traffic Services (NATS) to address the effects of the Proposed Development on the Lowther Hill and Great Dun Fell radars. The residual effects on the radars will be of **moderate/minor significance**.

In summary, it is concluded in the EIAR that, with this mitigation in place, there are **no significant residual effects** from the Proposed Development upon aviation interests.

5.8. Eskdalemuir Seismic Array

The Proposed Development Area is approximately 37 km from the Eskdalemuir seismic array. The array is used to monitor worldwide compliance with the Comprehensive Nuclear-Test-Ban Treaty and is safeguarded by the MoD to ensure other sources of vibration do not compromise its ability to detect nuclear weapon tests. Wind turbine developments are prohibited within a 10 km radius zone around the array, and a 'noise budget' of 0.336 nanometres (nm) applies to wind turbine developments in a zone of between 10 and 50 km radius from the facility. Existing, consented and in-planning wind energy developments have used up all of this budget.

Studies carried out on behalf of the Scottish Government, in particular the Phase 4 updated report published 10th February 2022 (SGV_204_Tech_Report_v12), have concluded that there is scope for revising the method of calculation of the noise budget as the algorithm consistently over-estimates measured noise data in order to facilitate further wind energy development within 50 km of the array. In addition, it has been proposed that an extension of the wind farm exclusion zone to 15 km radius would free up noise budget for projects at greater

range from the array, by eliminating the disproportionately high consumption of the budget by large projects close to Eskdalemuir.

The Proposed Development is of relatively small scale and is located in the outer third of the zone within which the noise budget applies. Since the detected noise at the array reduces with wind farm size and range from the array, it is expected that the Proposed Development will be capable of accommodation within the revised noise budget and safeguarding zone structure that are under consideration by the Scottish Government and the MoD.

The Proposed Development is predicted to have potential effects on the Eskdalemuir seismic array. Following implementation of appropriate mitigation, the effects are expected to be of low magnitude resulting in a residual adverse effect of **moderate significance**.

5.9. Telecommunication Networks

Poorly placed wind turbines can have a detrimental impact on telecommunications networks. In order to prevent impacts on existing infrastructure, consultation was carried out with telecommunications operators during the scoping exercise.

British Telecom (BT) and Joint Radio Company (JRC) provided a consultation response to confirm that the Proposed Development would not cause interference to current and planned radio networks. Atkins Global were consulted but did not respond.

With the information available to the Applicant, the Proposed Development does not directly affect microwave fixed links and the potential effect on microwave fixed links is **not significant**. Pre-construction checks will also be undertaken to ensure this remains the case nearer the time of construction.

5.10. Public Access

The potential effects of the Proposed Development on Public Access is also assessed in Chapter 14 of the EIAR. There are various Core Paths and Rights of Way in the vicinity of the Proposed Development Area however, no Core Paths are situated within the Proposed Development Area. There is a Right of Way which extends into the Proposed Development Area by about 800 m following a route north from the village of Walkerburn, however, these paths are some distance from the works and not considered to have an impact from the Proposed Development.

Although members of the public have the right to roam land in Scotland under the Land Reform (Scotland) Act 2003, there will be restricted access during the construction phase for Health & Safety purposes. The Proposed Development Area would be managed during the construction phase under the Construction (Design and Management) Regulations 2015.

Appropriate Health & Safety signage will be erected in the Proposed Development Area to provide safe day-to-day navigation, for emergency vehicles to navigate if required and to aid comprehensive risk assessment for those visiting and using the site. The exact number of signs required at any of the post locations would be decided post consent, following a review of the health and safety requirements and would be confirmed and agreed with the local planning authority through an appropriately worded planning condition.

During the operational phase, the access tracks for the Proposed Development will be available as multi-use trails. This will improve local access to Scawd Law ridge. Further multi-use trails are proposed and will lead to the top of Scawd Law with the intention to improve recreational access for mountain biking, cycling, walking running and horse-riding within the Proposed Development Area. The proposed multi-use trails will form a separate planning application subsequent to the submission of the Proposed Development application (see Technical Appendix 13.3).

In summary, there are **no direct adverse effects** upon Public Access.

5.11. Public Water Supply

The potential effects by the Proposed Development are assessed in Chapter 9 of the EIAR. The Applicant consulted with Scottish Water during the EIA process to ensure Public Water Supplies would remain safeguarded. No activities associated with the Proposed Development are located within the catchment of the identified Public Water Supplies.

In addition, embedded mitigation following best practice and a PPIP will ensure there are **no significant adverse effects on Public Water Supplies**.

5.12. Shadow Flicker

The potential effects by the Proposed Development are assessed in Chapter 14 of the EIAR. Wind turbines are tall structures which can cast long shadows when the sun is low in the sky. Under certain conditions (e.g. clear skies, enough wind for the turbines to be rotating and a low angle of the sun in the sky), residents of properties close to a wind farm could experience a phenomenon commonly known as ‘shadow flicker’, where the rotating turbine blades pass between the sun and the observer creating an intermittent shadow through window openings. It is however, part of the nature of long shadows that they pass any particular point relatively quickly and the effect, if present, lasts a short period of time, due to the movement of the sun across the sky. They are generally observed in the period after dawn and before sunset as the sun is rising and setting.

Standard guidance³ states that shadow flicker occurs within ten rotor diameters of the turbine, and that effects only occur within 130 degrees either side of north relative to the turbine. There are no residential properties identified within these limits and therefore the need to undertake an assessment has been removed and not considered further within the EIAR.

5.13. Socioeconomics, Tourism and Recreation

Chapter 13 of the EIAR provides an assessment of the likely significant Socioeconomics, Tourism and Recreation effects from the construction and operation of the Proposed Development. The Study Areas adopted were the Labour Market Study Area which assessed across both the Galashiels and Peebles Travel to Work Areas and the SBC Study Area; and the Tourism and Visitor Economy Study Area to enable consistency with the significant visual effects concluded within Chapter 6 – Landscape and Visual. The tourism effects are assessed within a 12 km radius of the site capturing key tourist recreational routes and tourism assets.

Taking account of embedded mitigation, the sensitivity of identified receptors and the magnitude of predicted socio-economic changes, the assessment concludes that the Proposed Development is likely to result in the following residual effects:

- *Net construction employment:* approximately 271 net temporary construction jobs within the TTWA Study Area over the 15-month construction period resulting in a Short-Term Moderate Beneficial effect
- *Net construction employment:* approximately 324 net temporary construction jobs within the SBC Study Area over the 15-month construction period resulting in a Short-Term Moderate Beneficial effect

³ Available at <https://www.gov.scot/publications/onshore-wind-turbines-planning-advice/> (accessed 27/01/2022)

- *Net Construction Gross Value Added (GVA)*: some £17.00million Net GVA over the 15-month construction period resulting in a Short-Term Moderate Beneficial effect
- *Net Construction GVA*: generate some £20.38million Net GVA over the 15-month construction period within the SBC Study Area resulting in a Short-Term Moderate Beneficial effect
- *Local Economic Development*: there is an expectation that community benefit clauses should be considered by public bodies in procurement contracts, wherever there is an appropriate legal basis to do so. This could result in community benefits from the construction phase of the Proposed Development such as charitable donations and engagement with the local community, resulting in a Short-Term Low Beneficial effect
- *Tourism and Recreation Study Area*: no relevant receptor grouping of the tourism and recreation sector is likely to experience construction phase effects which would be considered significant in the context of the EIA Regulations. The Tourism and Recreation sector is likely to experience a temporary Low / Moderate adverse effect from the construction of the Proposed Development.
- *Net Operational employment*: The lifetime of the project is envisaged to be up to 35 years over which period there is likely to be maintenance and site visits by existing Applicant technicians (to the infrastructure and turbines). As existing staff however, this will result in No Change across the TTWA Study Area or the SBC Study Area on the labour market.
- *Onshore Wind Sector*: The Proposed Development has a total generation capacity of 60 MW directly contributing towards the UK onshore wind sector, increasing renewable energy capacity within Scotland. This results in a Long-Term Moderate Beneficial effect.
- *Local Economic Development*: The Applicant have held recent discussions with relevant Stakeholder regarding community ownership. Though this is subject to further discussion, an option has been presented for the local community to buy up to 5% of the shares in the company directly owning the windfarm. This results in a Long-Term Low Beneficial effect.
- *Tourism and Recreation Study Area*: no relevant receptor grouping of the tourism and recreation sector is likely to experience construction phase effects which would be considered significant in the context of the EIA Regulations. The Tourism and Recreation sector is likely to experience a Long-Term Low / Moderate adverse effect from the operation of the Proposed Development as a whole.
- *Onshore Wind Sector*: decommissioning of the Proposed Development will result in a Short-Term Low / Moderate Beneficial effect.

The cumulative impact assessment assessed the likely significant cumulative effects in relation to Socio-economics, Tourism and Recreation of the Proposed Development in combination with the cumulative sites presented in Appendix 6.2. The assessment concludes the following likely cumulative effects:

- *Labour Market Effects*: The construction of the cumulative developments in combination with the Proposed Development has the potential to give rise to cumulative labour market effects and encourage greater levels of investment in the construction sector. This is likely to result in a Long-Term Moderate Beneficial cumulative effect on the labour market across both the assessed SBC Study Area and the TTWA Study Area
- *Sectoral Effects - Construction*: GVA generated through the construction phase of the Proposed Development in combination with the Cumulative Developments could act as a stimulus to the wider construction sector and induce multiplier effects. This is likely to result in a Long-Term Moderate Beneficial

cumulative effect on the labour market across both the assessed SBC Study Area and the TTWA Study Area

- *Sectoral Effects – Onshore Wind:* The delivery of the Proposed Development in combination with the cumulative sites presented in Appendix 6.2 (comprising of other wind farm developments) will further contribute towards the UK Onshore Wind sector and continue to emphasise its strategic importance. This is likely to result in a Long-Term Moderate Beneficial cumulative effect on the labour market across both the assessed SBC Study Area and the TTWA Study Area

As evidenced in Appendix 13.2 – Socioeconomic Policy Context there is no quantifiable evidence available to indicate that visual impacts alone will materially alter the experiential value of each key component of the tourism and recreation sector (i.e. each receptor grouping). On this basis, there would be no new or different likely cumulative effects on the tourism and recreation sector from the Proposed Development in combination with the cumulative sites.

5.14. Carbon Balance

Peatland is an important carbon store and the Proposed Development will have some impact on onsite peatlands, despite mitigations proposed to limit disturbance to peat and bog habitats. During hydrology studies a peat survey was done on the site which showed the area of peat on the site was very limited (See Figure 9.4, Volume 3a).

A carbon balance assessment report has been produced and SEPA's Carbon Calculator completed to determine the carbon payback time for the Proposed Development (see EIAR Technical Appendix 9.1 for full details). The results from the carbon calculator reveal that the net impact of the Proposed Development will be positive overall over its 35-year lifespan. It is expected to generate 33 years' worth of clean energy if it replaced fossil fuel electricity generation. In addition, over the expected 33 years that the wind farm is likely to be generating carbon-free electricity, this could result in expected **CO₂ emission savings of over 1.6 million tonnes⁴ of CO₂** when replacing fossil fuel-mix electricity generation.

Since the negative payback period represents approximately 3.7-5% (1.3 to 1.8 years) of the operational period (35 years) and the positive contribution is 94.2% (33 years), it is possible to conclude that the positive contribution is statistically significant. The Proposed Development therefore illustrates a **significantly positive** net impact in terms of its contribution towards the reduction of greenhouse gas emissions from energy production.

5.15. Synergistic Effects

An assessment of synergistic effects considers the combination of effects upon different topics together. This is provided in Chapter 15 of the EIAR. It ensures that the assessments provided in the EIAR for each topic are not considered in isolation.

During the construction and decommissioning phases, potential adverse synergistic effects are limited to the Proposed Development Area where there will be heavy plant operations, earthworks and vehicle movements. These could result in potential synergistic effects upon physical and biological receptors including where there are overlaps between ecology, hydrology and hydrogeology. In isolation, each have been assessed in the EIAR as **not significant**. These effects have been considered together and, through careful initial site design and including embedded mitigation, would be temporary in nature and will be managed through a CEMP,

⁴ Calculation is 33 years x 49,385 tCO₂ (as shown in Technical Appendix 9.1 Table 4 and online submission).

PPIP, HMP, TMP, Water Quality Monitoring Plan (WQMP) and/or Decommissioning Plan. These potential effects will also be monitored by an independent ECoW and, if deemed necessary, enforced through planning condition(s) by a Planning Monitoring Officer.

Given the limited number and extent of receptors, the limited effects predicted and their temporary nature, the synergistic effects during construction and decommissioning phases are considered **not significant**.

Potential synergistic effects during the operational phase relate primarily to overlaps between physical and human receptors and are limited to areas which are within or close to the Proposed Development Area where there may be a combination of potential visual and noise effects.

The EIAR predicts that there are no significant adverse effects in isolation for noise. No residential receptors will experience synergistic impact from both noise and shadow flicker as the properties are situated out with the limits where shadow flicker would be present.

There would be visual impact on four of the residential receptors assessed due to the openness of the view from the properties within 3 km of the proposed turbines however the synergistic effect is not considered to be overbearing or alter the area such that it becomes an unpleasant place to reside.

The inclusion of a Habitat Management Plan which will restore areas of wet/dry modified bog and enhance riparian habitat within the Proposed Development Area which will reduce the magnitude of the residual impacts to peatland habitats and thus have a positive synergistic effect in this regard.

5.16. Summary

This section of the NTS has present the potential significant effects of the Proposed Development and the measures taken or put forward to reduce the potential significant effect identified (mitigation). In doing so, it has addressed Regulation 5(2)(b) and 5(2)(c) of the EIA Regulations.

6. Conclusions

This NTS has provided a non-technical summary of the Proposed Development, which is assessed in greater detail throughout the EIAR. This NTS has presented the information required of the EIA Regulations in a manner that can be readily understood.

The Proposed Development has been located in a suitable area for wind farm development following a site selection and design process. The design stages have taken place over several years utilising a number of iterations in response to environmental data, new policies, market dynamics and consultee response. Through balancing the various site constraints with the scale of development required to be economically viable, the Applicant considers that the Proposed Development provides the best use of the site with respect to the potential renewable electricity generating capacity balanced against the potential environmental and other effects.

The EIAR presents the potential effects of the Proposed Development as well as potential synergistic effects which consider such effects in combination. No significant effects are predicted across ecology, ornithology, hydrology, carbon balance, cultural heritage, noise, traffic and transport, socioeconomics, telecommunications, existing infrastructure or public access. Moderate/minor and major significant effects are predicted for aviation and landscape and visual impact respectively. Following the use of mitigation, potential significant adverse effects are restricted to isolated landscape and visual effects which would be relatively contained within the surrounding landscape, limiting significant effect to within 8 km of the Proposed Development. In addition, proposed mitigation for aviation effects including the Radar Mitigation Scheme will reduce moderate significant effect to the Proposed Development.

The Applicant has proposed enhancements including HMP which will restore degraded bog habitats and enhance riparian habitats. The Proposed Development will provide socioeconomic benefits through continuing employment opportunities it has already provided at the planning stage throughout the lifetime of the project following consent. The Proposed Development will contribute towards meeting national renewable energy targets and have a significant positive effect on reducing carbon dioxide emissions to help reach the national carbon net zero target.

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