

1 Introduction

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1. Introduction

1.1. Introduction

- 1.1.1. SETT Wind Development Limited (hereafter referred to as “the Applicant”) is applying to Scottish Ministers for Section 36C consent under the terms of the *Electricity Act 1989* and the *Town and Country Planning (Scotland) Act 1997*, for permission to vary the deemed planning permission for Shepherds' Rig Wind Farm (hereafter referred to as the “Proposed Varied Development”), at site centre British National Grid (BNG) 262319 593591 approximately 5 kilometres (km) to the east of Carsphairn and 10 km north of St John's Town of Dalry, in northern Dumfries and Galloway (refer to **Figure 1.1**).
- 1.1.2. The application is supported by this Environmental Impact Assessment (EIA) Report as required by *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017* (as amended) (the “EIA Regulations”). This EIA Report has been prepared to assess the environmental impacts of the Proposed Varied Development and accompanies the Section 36C Application submitted to the Scottish Ministers.
- 1.1.3. This Chapter provides an introduction to the Proposed Varied Development and the background of its proposal, as well as providing an overview of the purpose of the EIA Report, its structure and the EIA project team.

1.2. The Applicant

- 1.2.1. The original Section 36 Application for Shepherds' Rig Wind Farm (hereafter referred to as the “Consented Development”) was submitted by Infinergy on behalf of the applicant SETT Wind Development Limited, a company formed by Infinergy Limited and Boralex limited liability partnership (LLP). In July 2022, Boralex acquired 100% of Infinergy's interests in the UK.
- 1.2.2. The Applicant remains the same as before, SETT Wind Development Limited. Boralex Limited is the UK branch of Boralex Inc, a Canadian power provider. Boralex has been providing affordable renewable energy for over 30 years as a developer, builder, owner and operator of hydro, onshore wind, solar photovoltaic and battery storage. A leader in the Canadian and French market, the company is also active in the United States and the United Kingdom.
- 1.2.3. Over the past five years, Boralex's installed capacity has more than doubled to over 3 gigawatts (GW). The development portfolio comprises over 6 GW in wind, solar projects and storage projects. Further information can be found at www.boralex.com.

1.3. Project History

- 1.3.1. The original Scoping Report for the Consented Development was submitted to the Energy Consents Unit (ECU) in 2013, seeking a Scoping Opinion on a layout of up to 45 turbines with a tip height of 149.5 m. Constraints analysis and layout design work continued to

ensure the scheme was both environmentally sensitive and economically viable until the project was put on hold in 2015.

- 1.3.2. An updated Scoping Report for the Consented Development was submitted to the ECU in 2018 following a review of economic viability and the recommencement of environmental survey work. This included a layout of up to 30 turbines with a tip height of 149.5 m. Further modelling exercises during the design iteration process led to the Applicant submitting an EIA Report in November 2018 in support of a Section 36 Application to seek consent for a 19 turbine development: 17 turbines at 149.9 m to tip, and 2 turbines at 125 m to tip.
- 1.3.3. Upon receipt of the consultation responses to the Section 36 application for the 19 turbine layout, the Applicant undertook further design and assessment work, amending the layout to 17 turbines (15 turbines with a maximum blade tip height of 149.9 m and two turbines with a maximum blade tip height of 125 m) as presented within an Additional Environmental Information (AEI I) report submitted in October 2019. Dumfries and Galloway Council objected to the Consented Development upon landscape and visual grounds, triggering a Public Inquiry, where the Applicant prepared a further Additional Environmental Information (AEI II) report (March 2021).
- 1.3.4. The Consented Development was granted Section 36 consent by Scottish Ministers in August 2023 following the Public Inquiry. A copy of the Consented Development's decision letter is included in **Appendix 1.1**.

1.4. Overview of the Proposed Varied Development

- 1.4.1. As set out above, the Applicant gained Section 36 and deemed planning permission from Scottish Ministers in August 2023 to construct and operate the Consented Development. The Consented Development comprises 17 turbines (15 turbines with a maximum blade tip height of 149.9 m and two turbines with a maximum blade tip height of 125 m) and associated infrastructure.
- 1.4.2. The Applicant is now applying to Scottish Ministers for consent under Section 36C of the *Electricity Act 1989 (as amended)* and the *Town and Country Planning (Scotland) Act 1997* to vary the Consented Development. The proposed variations include:
- Removal of six turbines and associated crane hard standings;
 - Increase in the maximum blade tip height of the remaining 11 turbines to 220 m;
 - Increase in size of associated crane hardstandings to accommodate the larger turbines;
 - Relocation of eight turbines beyond the micrositing allowance of the Consented Development, but within the same pattern of development;
 - Amendments to part of the track layout to reflect turbine removal and relocation (as outlined above);

- Change to the number and location of required watercourse crossings to accommodate the amended track layout;
- Increase in size and capacity of the associated Battery Energy Storage System (BESS);
- Relocation of the temporary construction compound slightly beyond micrositing allowance;
- Removal of the previously proposed permanent anemometer mast; and
- Increase to the period of consent from 30 to 40 years.

1.4.3. Collectively, the proposed variations listed above are referred to as the 'Proposed Varied Development'. The key element of the variation is that the locations of three of the proposed turbines are within micrositing allowance for the Consented Development, whilst a further four remain broadly within the same location but beyond the micrositing allowance. The remaining four turbine's locations have been adjusted to incorporate on-site constraints and the larger turbine infrastructure and remain within a similar pattern of development to the Consented Development. A comparison of the Proposed Varied Development's layout to that of the Consented Development is outlined in detail within **Chapter 4: Description of the Proposed Varied Development** and the difference in turbine locations illustrated on **Figure 4.2**. The site boundary of the Proposed Varied Development remains the same as the Consented Development.

1.4.4. Based on the candidate turbine model, the Proposed Varied Development is expected to have an indicative installed wind energy generating capacity of 77 MW compared to 70.2 MW for the Consented Development. The Proposed Varied Development's BESS maximum storage capacity is 50 MW compared to 6 MW for the Consented Development.

1.5. Variation Rationale

Increase in Wind Turbine Tip Height

- 1.5.1. The Applicant has calculated that the energy yield of the Consented Development can be increased by approximately 53% by increasing the height of the proposed turbines. This increase in turbine height, together with the reduction in turbine numbers, would only result in limited changes to environmental effects (as outlined within technical **Chapters 7 - 18** of this EIA Report). These primary factors have encouraged the Applicant to seek consent for a variation to the Consented Development, as outlined in this EIA Report.
- 1.5.2. The increased yield would enable the Proposed Varied Development to make an even greater contribution to UK and Scottish Government climate change and renewable energy targets and commitments.

Decrease in Turbine Number

- 1.5.3. Larger turbines require more space to operate efficiently and to avoid interfering with each other's wind resource. Reducing the number of turbines while increasing their height allows for a more efficient and contained layout.

Crane Hardstanding Increase

- 1.5.4. To accommodate the proposed increase in the tip height of the wind turbines, the size of the crane hardstandings will need to be expanded.

Access Tracks & Watercourse Crossings

- 1.5.5. Due to the proposed turbine removal and relocation, it has been necessary to amend parts of the internal access tracks and associated watercourse crossings to reflect these changes.

Increase in BESS Capacity and Size

- 1.5.6. Increasing the capacity of the BESS from 6 MW to 50 MW allows for greater storage of excess energy generated during peak wind periods. This enhances the flexibility and reliability of the Proposed Varied Development by ensuring a steady supply of power even when wind generation is low. The increased storage capacity helps to balance supply and demand, enhancing the overall grid stability.
- 1.5.7. This increase in BESS capacity necessitates the increase in size of the substation and BESS compound which houses the electrical equipment.

Temporary Construction Compound

- 1.5.8. To minimise cut and fill volumes, the Applicant has adjusted the siting of the temporary construction compound, moving it marginally beyond the micro-siting allowance for the Consented Development.

Anemometer Mast

- 1.5.9. The Consented Development included for an operational phase anemometer mast located within the northwestern part of the site. There is no longer a requirement for an anemometer mast as part of the Proposed Varied Development and as such a variation is being sought to remove this from the associated infrastructure.

Lifetime Increase

- 1.5.10. Extending the operational lifetime of the Consented Development would enable the Proposed Varied Development to prolong its contributions to UK and Scottish Government climate change and renewable energy targets and commitments. This extension ensures that the Proposed Varied Development continues to provide renewable energy for a longer period, contributing to long-term decarbonisation goals.

1.6. Site and Proposed Varied Development Description

Site Description

- 1.6.1. The site remains the same as that of the Consented Development and is located approximately 5 km to the east of Carsphairn and 10 km north of St John's Town of Dalry, in northern Dumfries and Galloway (refer to **Figure 1.1**).
- 1.6.2. The site lies approximately 2 km to the north of the Glenken valley, which contains a sequence of lochs and associated hydro schemes and is adjacent to the upper valley of the Water of Ken which lies close-by to the east. The site lies approximately 3 km to the south-east of the summit of Cairnsmore of Carsphairn. The site covers an area of approximately 752 hectares (ha) and is centred on approximate national grid reference (easting) 262319 and (northing) 593591.
- 1.6.3. The site comprises commercial coniferous woodland plantation and is bounded to the north and north-east by further forestry and to the west, east and south-east by open moorland. The majority of the site comprises smooth rolling topography, with the exceptions of Cragengillan Hill located in the north of the site (401 m Above Ordnance Datum [AOD]) and Marscalloch Hill situated on the south-western boundary [381 m AOD]. The Southern Upland Way passes to the east of the site.
- 1.6.4. The Scheduled Monument Craigengillan Cairn is located within the north-eastern part of the site, and Stroanfreggan Craig Fort is located approximately 300 m from the south-east boundary of the site.
- 1.6.5. The nearest statutory ecological designation is the Cleugh Site of Special Scientific Interest (SSSI), which lies approximately 4 km to the south and is designated for its unimproved lowland neutral grassland. Dundegh Wood, to the south of the site, is listed in the Ancient Woodland Inventory.
- 1.6.6. The site is not located within or near a national landscape designation, with the nearest, the Fleet Valley National Scenic Area, lying approximately 25 km to the south. The Galloway Hills Regional Scenic Area (RSA) lies immediately to the west of the site and a small part of the western edge of the site lies within the RSA.

Overview of Proposed Varied Development

- 1.6.7. The Proposed Varied Development will comprise up to 11 wind turbines, each up to 220 m blade tip height, as well as associated infrastructure. Its total maximum wind generating capacity is anticipated to be in the region of 77 MW, based on the candidate turbine type (Nordex N163).
- 1.6.8. In addition to the turbines, associated elements of the proposal will include:
- turbine foundations;
 - crane hard standings;

- a BESS facility of up to 50 MW;
- on-site access tracks between turbines and from the point of access to the turbines;
- watercourse crossings;
- on-site substation and maintenance building with welfare facility and associated communications equipment;
- on-site electrical cabling between the turbines and the substation and BESS;
- a temporary construction compound;
- a temporary concrete batching plant;
- two borrow pits to provide aggregate for the construction of the Proposed Varied Development; and
- habitat enhancement areas including forest to bog peatland restoration and native riparian planting.

1.6.9. As with the Consented Development, a number of off-site road improvements will be required including over-run areas, primarily along the B729 between Carsphairn and the site access. This has been presented in the Abnormal Load Route Assessment (**Appendix 15.1**) of this EIA Report. An environmental appraisal of the off-site road works has also been provided as **Appendix 15.2**.

1.6.10. Based on the Proposed Varied Development's location and estimated capacity factor, the annual indicative total electricity output for the site would be 241,340 megawatt hours (MWh) per annum¹. The Proposed Varied Development would generate enough electricity to power approximately 76,860 average Scottish households. The Proposed Varied Development would contribute towards international and national targets for the generation of renewable energy and reduction in greenhouse gas emissions. The Proposed Varied Development is described in detail in **Chapter 4**.

1.6.11. As with the Consented Development, it is anticipated that the electricity produced by the Proposed Varied Development will be exported to the wider electricity network via the proposed Lorg Grid Connection 132 kilovolt (kV) overhead line, which would intersect the centre of the site. A Section 37 application was submitted by ScottishPower Energy Network (SPEN) in November 2025 seeking consent for this new 132 kV line (ECU Ref: ECU00001789), which includes a full assessment of the grid connection route. There would be a short (approximately 200 m) underground connection between the Proposed Varied Development's substation and this proposed line, which would be subject to a separate consenting process by SPEN.

¹ Based on site-specific wind load factor of 37.4% and average annual Scottish domestic household consumption of 3,140 kWh (DESNZ, 2025).

1.6.12. The grid connection arrangements are discussed further in **Chapter 4**. The potential for cumulative effects of the Proposed Varied Development and the proposed Lorg Grid Connection has been considered by each technical assessment topic (**Chapters 7 - 18**) as appropriate. For the purposes of this application and the EIA Report, an initial proportionate assessment of the likely significant environmental effects resulting from this connection in combination with the Proposed Varied Development is provided in **Appendix 4.2**. This presents a high-level, desk-based review of environmental constraints and identifies any potential for likely significant effects of the indicative link from the on-site substation to the 132 kV overhead line.

1.6.13. Consent is being sought for an operational life of 40 years from the date of final commissioning of the wind turbines.

1.7. Purpose of the EIA Report

1.7.1. SLR was appointed by the Applicant to undertake an EIA of the Proposed Varied Development and produce an EIA Report in accordance with the EIA Regulations. The EIA process is the systematic process of identifying, predicting, and evaluating the environmental impacts of a proposed development. Where appropriate, it also sets out mitigation measures designed to prevent, reduce and, if at all reasonably possible, offset potential significant adverse environmental effects. An assessment of residual effects, those expected to remain following implementation of mitigation measures, is also presented.

1.7.2. The main findings and conclusions of this EIA Report are summarised in a Non-Technical Summary (NTS), as required by the EIA Regulations. The NTS, provided as a stand-alone document, summarises the key findings of the EIA in easily accessible, non-technical language, ensuring everyone with an interest in the project can understand and access information on its predicted environmental effects.

1.7.3. This EIA Report and its NTS accompany the application for Section 36C consent, being submitted to the Scottish Ministers.

1.8. Structure of the EIA Report

1.8.1. As per the EIA Regulations, the further assessment required to inform the Section 36C Application will consider the impacts of the Proposed Varied Development and how those impacts differ from those previously identified for the Consented Development.

1.8.2. The likely significant effects of the Proposed Varied Development (as a whole) are identified, described, and assessed in the EIA Report. The EIA Report then considers the impacts of the proposed variations and how those impacts differ from those previously identified for the Consented Development.

1.8.3. The EIA Report is split into four volumes, with the NTS forming a further separate document. This document is Volume 1 of the EIA Report and it is structured as follows:

- Chapter 1 provides an introduction to the EIA Report and its authors;

- Chapter 2 provides a description of the Proposed Varied Development site and its geographical context;
- Chapter 3 provides a description of the design iteration process, detailing how the Proposed Varied Development evolved through the course of the assessment process and the elimination of alternative development options;
- Chapter 4 provides details of the Proposed Varied Development, the construction, operation and maintenance processes, decommissioning process, need for the development and carbon considerations;
- Chapter 5 outlines the planning and energy policy context;
- Chapter 6 describes the methodology of the EIA process including the scope of the assessments, justification for topics scoped out of the EIA, and details of the public consultation process;
- Chapter 7 considers the potential implications of the Proposed Varied Development on woodland resource;
- Chapter 8 assesses the effects on landscape and visual amenity;
- Chapter 9 assesses the effects on ecology;
- Chapter 10 assesses the effects on ornithology;
- Chapter 11 assesses the effects on cultural heritage;
- Chapter 12 assesses the effects on geology and peat;
- Chapter 13 assesses the effects on hydrology and hydrogeology;
- Chapter 14 assesses the effects of noise;
- Chapter 15 assesses the effects on traffic and transport;
- Chapter 16 assesses the effects on aviation;
- Chapter 17 assesses the effects of shadow flicker;
- Chapter 18 assesses the effects on climate change and carbon balance;
- Chapter 19 is the Schedule of Mitigation, which summarises all of the mitigation measures presented in this EIA Report; and
- Chapter 20 provides summary tables of all predicted residual and cumulative effects.

1.8.4. Volume 2 contains the figures that inform the EIA Report.

1.8.5. Volume 3 contains the landscape and visual and cultural heritage visualisations and photomontages that inform **Chapters 8 and 11**.

- 1.8.6. Volume 4 contains supporting information and appendices for each of the technical chapters, and additional studies that have been prepared to inform the relevant assessments as reported in the EIA Report.
- 1.8.7. A standalone Planning Statement assessing the Proposed Varied Development against all relevant planning and energy policy will form part of the application submission, along with a Socio-economic Impact Assessment Report and a Pre-Application Consultation (PAC) Report explaining the consultation carried out with the local communities on the Proposed Varied Development.

1.9. Assessment Team

- 1.9.1. The assessment was undertaken by SLR's environmental teams supported by external consultants. **Table 1.1** outlines the full EIA team and their experience.

Table 1.1 – EIA Project Team

Consultant	Input to EIA	Company	Experience
Jenny Hazzard	EIA Project Director	SLR	BSc (Hons) Geological Engineering, MSc Engineering Geology. PISEP. 25 years' of experience in the environmental consultancy industry.
Charlotte Kenyon	EIA Project Manager & Shadow Flicker Assessment	SLR	MA (Hons) History, MSc Environmental Sustainability. AISEP. Over four years' experience in environmental consultancy.
Andrew Robertson	EIA Assistant Project Manager & Shadow Flicker Assessment	SLR	MA (Hons) Geography, AISEP. 1.5 years' experience in environmental consultancy.
David Bell	Planning Policy Context	David Bell Planning	BSc (Hons) Town & Country Planning, Diploma Urban Design, MCIHT, MRTPI. Over 30 years' experience in planning and development.
James Anderson	Forestry Assessment	DGA Forestry	Diploma Architecture, BArc Architecture, MSc Forestry. 13 years' experience in forestry consultancy.
David Gooch	Landscape and Visual Impact Assessment	Pegasus	MA (Hons) Landscape Architecture, CMLI. Over 20 years' experience as a landscape architect.

Consultant	Input to EIA	Company	Experience
Ian Heard	Ecology Assessment	BSG Ecology	BSc (Hons) Zoology, MSc Managing the Environment; Habitat Restoration and Conservation. Over 13 years' experience as an ecologist.
Gareth Lang	Ecology Assessment	BSG Ecology	BSc (Hons) Zoology, MSc Environmental Biology. Over 11 years' experience as an ecologist.
Blair Urquhart	Ornithology Assessment	Natural Research Projects (NRP)	Diploma in Conservation Management. Over 25 years' experience working with birds and their conservation, with over 15 years of ornithology and ecology experience in the consultancy sector.
Owen Raybould	Cultural Heritage Assessment	Headland Archaeology	BSc (Hons) Archaeological Science. Over 19 years' professional historic environment sector experience.
Duncan Saunders	Geology and Peat Assessment, Hydrology and Hydrogeology Assessment, Carbon Balance Assessment	Fluid Environmental Consultants	BSc Geophysical Sciences, MSc Water Resources. 27 years' experience as a hydrogeologist.
Lucy Parker	Geology and Peat Assessment & Hydrology and Hydrogeology Assessment, Carbon Balance Assessment	Fluid Environmental Consultants	BSc Environmental Geoscience, MRes Science in the Environment, Hydrology and Water Resources Science. Over 19 years' experience in environmental consultancy.
Moise Coulon	Noise and Vibration Assessment	TNEI	Institute of Acoustics Diploma in Acoustics & Noise Control. MIOA. Over 18 years' experience as a noise consultant.
Gordon Buchan	Traffic and Transport Assessment	Pell Frischmann	MSc Transport Engineering, BEng (Hons) Civil & Transportation Engineering, CMILT, MCIHT. 27 years' experience as a transport consultant.
Stephen Cochrane	Traffic and Transport Assessment	Pell Frischmann	HND Civil Engineering, BSc (Hons), CMILT, MCIHT

Consultant	Input to EIA	Company	Experience
			Over 22 years' experience in the traffic and transport industry.
John Taylor	Aviation Assessment	WPAC	BRNC Dartmouth, specialising in Air Traffic Control (ATC). 33 years as Royal Navy Air Traffic Controller and Fighter Controller with 14 years advisory experience.
Simon Cleary	Socio-economic Assessment	BiGGAR Economics	MA (Hons) Economics and Mathematics. Over 11 years' consultancy experience in the renewable energy sector.

1.10. Availability of the EIA Report

- 1.10.1. In accordance with Regulation 18 of the EIA Regulations, copies of the EIA Report will be available for inspection by the public, notice of which will be published on the application website, in the Scotsman or The Herald, the Edinburgh Gazette, and in a relevant newspaper within the locality of the Proposed Varied Development, which is likely to be the Galloway News.
- 1.10.2. Printed copies of the NTS and EIA Report are available by request from:
- Boralex
The Auction House
63a George Street
Edinburgh EH2 2JG
Email: info@shepherdsrigwindfarm.co.uk
Freephone: 0800 980 4299
Website: <https://www.shepherdsrigwindfarm.co.uk/>
- 1.10.3. A printed copy of the EIA Report will be available to view during opening hours at the following locations:
- Lagwyne Hall, Main Street, Carsphairn, DG7 3TQ;
 - Castle Douglas Library, Customer Service Centre, Market Hill, King Street, Castle Douglas, DG7 1LU; and
 - Dumfries and Galloway Council Customer Services, Kirkbank House, English Street, Dumfries, DG21 2HA.

1.10.4. Electronic copies of the EIA Report, including all figures, appendices and accompanying documents are available to view on the project website <https://www.shepherdsrigwindfarm.co.uk/> and can be accessed at <https://www.energyconsents.scot>.

1.10.5. Printed copies of the NTS are available free of charge from the Applicant. The cost of a hard copy of the EIA Report Volumes 1 to 4 is £1,500. In addition, all documents are available (as a PDF for screen viewing) on a DVD/USB free of charge while stocks last. The price of the hard copy reflects the cost of producing all of the Landscape and Visual graphics and visualisations at the recommended size. As such, a DVD/USB version is recommended.

1.11. Representations to the Application

1.11.1. Any representations to the application should be submitted via www.energyconsents.scot, using the relevant project name, Shepherds' Rig Wind Farm, and/or the ECU reference number ECU00005137. Please note that you must be in possession of a working email address to submit a representation virtually.

1.11.2. If you would prefer to submit your representation by post, please send to the Scottish Government at:

Energy Consents Unit

5 Atlantic Quay

150 Broomielaw

Glasgow

G2 8LU

1.11.3. Written representations should be dated, clearly stating the name (in block capitals) and full postal address of those making representation.

References

Scottish Government (2017). The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. Available at: <https://www.legislation.gov.uk/ssi/2017/101/regulation/18/made>

UK Government Department for Energy Security and Net Zero. (2025). Subnational electricity and gas consumption summary report 2024. London: Department for Energy Security and Net Zero. Available at: <https://www.gov.uk/government/statistics/subnational-electricity-and-gas-consumption-summary-report-2024> Accessed: March 2026

UK Government (1989). Electricity Act 1989. Available at: <https://www.legislation.gov.uk/ukpga/1989/29/contents>

UK Government (1997). Town and Country Planning (Scotland) act 1997. Available at: <https://www.legislation.gov.uk/ukpga/1997/8/contents>

Abbreviations

Abbreviations	Definition
AEI	Additional Environmental Information
AOD	Above Ordnance Datum
BESS	Battery Energy Storage System
BNG	British National Grid
ECU	Energy Consents Unit
EIA	Environmental Impact Assessment
GW	Gigawatt
ha	Hectares
km	Kilometres
LLP	Limited Liability Partnership
m	Metres
MW	Megawatts
NTS	Non-Technical Summary
kV	Kilovolt
RSA	Regional Scenic Area
SPEN	ScottishPower Energy Network
SSSI	Site of Special Scientific Interest