1. INTRODUCTION

1.1 Introduction

1.1.1 This Environmental Impact Assessment Report (EIAR) has been prepared by Ramboll UK Limited (Ramboll) on behalf of SSE Generation Limited ('the Applicant') in support of an application for development consents to construct and operate a generating station incorporating up to 12 wind turbine generators (WTGs) of up to 180 m tip height, battery energy storage system (BESS) and associated infrastructure with generation capacity of greater than 50 MW (the Application). The project is to be referred to as Glentarken Wind Farm ('the Proposed Development').

1.1.2 The 'Site' (defined by the red line boundary on **Figure 1.1: Site Location (EIAR Volume 2))** is approximately 1,103 hectares, located approximately 45 km west of Perth within the Drummond Estate and approximately 2.8 km east of Lochearnhead, Stirling, Scotland. The Site includes land within the Perth and Kinross local authority area and the Stirling local authority area. The turbine array will be within Perth and Kinross, while the site entrance and a portion of the access track is located within the Stirling area.

1.1.3 The application for consent has been prepared by SSE Renewables Development (UK) Limited (SSE Renewables), "*the Developer*", on behalf of the Applicant. The Applicant holds the necessary generation licence required for the Proposed Development.

1.1.4 The EIAR comprises of the following volumes:

- Non-Technical Summary (NTS);
- Volume 1: Main Report;
- Volume 2: Figures;
- Volume 3: Visualisations;
- Volume 4: Technical Appendices; and
- Volume 5: Confidential Appendices.

1.2 Purpose and Scope of the EIAR

1.2.1 The EIAR has been prepared to accompany the Application to Scottish Ministers under Section 36 of the Electricity Act 1989 for construction and operation of a generating station together with a direction that planning permission be deemed to be granted for the proposed development under section 57(2) of the Town and Country Planning (Scotland) Act 1997 (together the "development consents"). The EIAR has been prepared in accordance with *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017* (the *'EIA Regulations'*) and the Institute of Environmental Management and Assessment (IEMA) Quality Mark Criteria.

1.2.2 The development for which the Applicant is seeks the development consents is as follows:

The erection and 50-year operation of a wind farm comprising up to 12 WTGs, each with a maximum overall height to vertical blade tip of up to 180 m, a BESS together with ancillary development including internal transformers and related switchgear at each turbine; associated turbine foundations and hardstanding areas; LiDAR unit and hardstanding; a network of new and upgraded access tracks with associated water crossings, passing places and turning heads; borrow pits; substation compound; network of electrical cables; telecoms infrastructure; new/improved vehicular access from a newly

constructed Junction along the A85; temporary site construction compounds; and temporary concrete batching plant, approximately 2.8 km east of Lochearnhead (the "Proposed Development").

1.2.3 The Proposed Development's point of connection to the National Grid, is located at the on-site substation platform. The transmission licence holder provides the connection to the existing Transmission system, which is anticipated as comprising a combination of Overhead Line (OHL) and underground cable via Killin Substation, located approximately 9 km from the Site. The connection between the on-site substation and Killin substation is the responsibility of the transmission licence holder (Scottish and Southern Electricity Networks Transmission) and is subject to a separate consenting process.

1.2.4 The exact route of the connection and the detailed technological solution have not yet been determined. As such, the grid connection is not included within the scope of this EIAR.

1.2.5 Full details of the Proposed Development are provided in **Chapter 2: Development Description (EIAR Volume 1**).

1.3 Other Planning Documents

1.3.1 The Application is accompanied by the following documents that do not form part of the EIAR:

- Planning Statement;
- Design and Access Statement;
- Pre-Application Consultation Report; and
- Economic and Community Impact Report

1.4 The Applicant

1.1.1 SSE Renewables is a leading developer and operator of renewable energy and part of SSE plc, a UK-listed energy company, headquartered in the UK and Ireland, with a growing presence internationally. The strategy seeks to integrate the principles of long term social and environmental sustainability with business goals which align to UN Sustainable Development Goals. SSE Renewables aims to lead the transition to a net zero future through world class development, construction, and operation of cleaner power assets across a range of renewable technologies, investing £7 billion over the next three years, or almost £4 million a day on average to deliver a Net Zero Acceleration Programme and address climate change head on. This includes plans to double its installed renewable energy capacity to around 9 Giga Watts (GW) by 2027 and at least 16 GW by 2032, contributing to a renewable portfolio generating at least 50 TWh of renewable energy annually – enough to be able to power around 20 million homes each year.

Environmental Commitments

1.4.1 As part of their sustainability strategy, SSE Renewables have targeted the Biodiversity Net Gain (BNG) ambition of no biodiversity net loss on onshore sites consented from 2023 and a biodiversity net gain on sites consented from 2025 onwards. SSE Renewables are committed to providing a measurable benefit to nature conservation and this is typified in the development of a ten-point plan for biodiversity[1].

1.4.2 The Applicant has developed a BNG toolkit based upon the Natural England Biodiversity Metric, which aims to quantify biodiversity based upon the value of habitats for nature. It is an efficient and effective method[2] for demonstrating whether development projects have been able to maintain or increase the

[1] https://www.sserenewables.com/sustainability/nature-positive/
[2] SSER (2024) Our BNG Toolkits. Available at: https://www.sserenewables.com/sustainability/nature-positive/

biodiversity value of a development site after construction works. Details of the BNG assessment are provided in **Technical Appendix (TA) 7.7: Outline Biodiversity Enhancement Management Plan (BEMP) (EIAR Volume 4).**

1.4.3 The Proposed Development has been designed with a focus on biodiversity enhancement and peatland restoration. Further details on potential biodiversity effects, mitigation and enhancement opportunities are provided in **Chapter 7: Ecology (EIAR Volume 1)** and the Outline BEMP **(TA 7.7, EIAR Volume 4)**.

1.5 The Need and Benefit of the Proposed Development

1.5.1 On 28th April 2019, Scotland's First Minister declared a climate emergency. Following this declaration, the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 ("*the 2019 Act*") was passed by the Scottish Parliament to amend the Climate Change (Scotland) Act 2009. The 2019 Act commits Scotland to reducing its greenhouse gas emissions to net-zero by 2045 at the latest. This compares with the UK Government target of net-zero by 2050.

1.5.2 The Proposed Development is, by definition, a National Development as set out in National Planning Framework (NPF) 4[3] and it will help to reduce the UK's dependence on volatile fossil fuel markets, by improving domestic energy production and making the UK more self-sufficient when it comes to the energy it uses

1.5.3 Further details on the statutory and policy framework are provided in **Chapter 4: Planning and Energy Policy (EIAR Volume 1)** and the supporting Planning Statement.

1.5.4 The project would bring a wealth of socio-economic benefits (refer to **Chapter 12 Socio-economics, Recreation and Tourism, EIAR Volume 1**) to the local community, including the creation of jobs and opportunities for local businesses and suppliers during the construction phase and for the lifetime of the project. A community investment fund will be established for Glentarken Wind Farm valued at £5,000 per Mega Watt (MW) installed wind energy capacity per year and index linked to CPI. The funding will be available once main construction starts and will remain in place for the operational life of the project. In addition, the Applicant is committed to open discussions about community ownership, should there be interest in pursuing it, for the Proposed Development. This application therefore not only complies with Scottish Government planning and energy policy but would also lead to increased benefits both in respect of climate change, as well as local economic benefits.

1.6 EIA Process

1.6.1 EIA is a process that identifies the significant environmental effects (both positive and negative) of a proposed development and proposes mitigation to avoid, reduce and offset any adverse environmental effects.

1.6.2 The Proposed Development is of a type listed in Schedule 2 of the EIA Regulations (paragraph 1(1) "*a generating station"*). On the basis that the development is "*likely to have significant effects on the environment by virtue of factors such as its nature, size or location*" for the purpose of paragraph 2(1) of the EIA Regulations the Applicant has undertaken this EIA Report to be submitted with the application for the Proposed Development.

[3] Scottish Government (2023). National Planning Framework 4. Available at; https://www.gov.scot/publications/national-planning-framework-4/

1.6.3 The key stages in the EIA process adopted for the Proposed Development are summarised below.

Scoping

1.6.4 The Applicant submitted a request for a Scoping Opinion to Scottish Ministers in December 2022. This request was accompanied by a Scoping Report, prepared by the Applicant, which set out a summary of the proposals; identified the likely significant environmental effects, and summarised the proposed scope of the EIA. The Scoping Report was simultaneously issued to a list of statutory and non-statutory consultees. A Scoping Opinion was received from Energy Consents Unit (ECU) on 22nd February 2023 (ECU Reference ECU00004700)[4]. Following discussion with ECU on 8th May 2024, it was agreed that a scoping refresh was not required and any design updates could be captured as part of the Gate Check 1 process.

1.6.5 Following scoping and baseline characterisation, the EIAR provides an impact assessment chapter for each of the following disciplines/factors/issues:

- Landscape and Visual;
- Ecology;
- Ornithology;
- Geology, Peat, Hydrology and Hydrogeology;
- Noise;
- Cultural Heritage;
- Socio-economics, Recreation and Tourism;
- Traffic and Transport;
- Aviation; and
- Television and Radio;

1.6.6 The contents of all consultation responses received for the Proposed Development are summarised in **TA 1.2: Consultation Register (EIAR Volume 4**), along with a list of all bodies consulted during the scoping exercise.

Public Consultation

Community Council Consultation

1.6.7 Throughout the consultation the Applicant has written on more than one occasion to four local community councils (St Fillans, Balquidder Lochearnhead & Strathyre, Killin and Comrie). Formal meetings took place with St Fillans in May and August 2023, and May 2024. and with Balquidder Lochearnhead & Strathyre in April 2023 and July 2024. A presentation was provided to Killin Community Council on Tuesday 5th November 2024 and similar engagement has been offered to Comrie Community Council.

Public Consultation Events

1.6.8 In addition to seeking a Scoping Opinion, the Applicant has conducted three sets of public exhibitions to seek the views of the local community and build awareness of the project. These initial public exhibitions were held in St Fillans on 19th April and in Lochearnhead on 20th April 2023. A second round of public exhibitions were held in St. Fillans on the 28th May 2024, and Lochearnhead on 29th May 2024. A third round of exhibitions, following design freeze ahead of submission were held in St Fillans on the 19th

[4] Energy Consents Unit (2023) Glentarken Wind Farm Scoping Opinion Available at: https://www.energyconsents.scot/ApplicationDetails.aspx?cr=ECU00004700

November and in Lochearnhead on 20th November 2024. Virtual exhibitions were also hosted in alignment with each set of events on 2nd and 4th May 2023, 12th June 2024, and 28th November 2024.

1.6.9 Details of all feedback received during the public exhibition event and community council meetings is provided within the Pre-Application Consultation (PAC) Report submitted as a supporting document to this EIA Report.

Identification of Baseline Conditions

1.6.10 Baseline characterisation is the process by which the environmental conditions are established now and in the future assuming no development on the site. The process has included a combination of desk research, site survey and empirical study and projection.

1.6.11 The environmental baseline adopted for the purposes of the EIA is stated in each of the technical assessment chapters provided in the EIAR. The baseline is normally taken as the current character and condition of the site and surrounds. The likely significant environmental effects of the development are then assessed in the context of the current conditions. Key environmental constraints are illustrated on **Figure 2.2 (EIAR Volume 2)**.

Mitigation by Design and Consideration of Alternatives

1.6.12 Following the baseline characterisation, the information collected on environmental constraints was used to inform the consideration of design alternatives. An iterative process was followed, whereby the Applicant considered a range of turbine layouts, height, and access proposals. The aim of the design element of the EIA process was to develop an optimal solution which seeks to maximise potential renewable energy generation, within technical and environmental constraints. The main aim has been to avoid likely significant environmental effects through the design. Further details on the design process adopted for the Proposed Development are set out within **Chapter 3: Evolution of Design and Alternatives (EIAR Volume 1)**.

Impact Assessment

1.6.13 The next stage in the EIA process was to complete an impact assessment to address the likely significant effects remaining following the implementation of mitigation by design. An assessment chapter has been provided for each issue where it is considered that there are likely significant effects associated with the construction, operation, decommissioning or restoration phases of the Proposed Development. Each assessment chapter considers primary, secondary, direct, indirect, and cumulative effects and defines the assessment methodology used and the criteria by which a significant effect is defined.

Cumulative

1.6.14 In accordance with the EIA Regulations, the assessment has considered 'cumulative effects'. Cumulative effects assessment is a key part of the EIA process and is concerned with identifying situations where a number of potential effects from separate projects could combine to cause a significant effect on a particular resource. Cumulative effects have been assessed within each chapter, at a scale appropriate to that subject.

1.6.15 There are two aspects to Cumulative Effects, defined as follows:

- In-combination effects: the combined effect of the Proposed Development together with other reasonably foreseeable developments (taking into consideration effects at the Site preparation and earthworks, construction, and operational phases); and
- Effects interactions: the combined or synergistic effects caused by the combination of a number of effects on a particular receptor (taking into consideration effects at the Site preparation and earthworks, construction, and operational phases), which may collectively cause a more significant effect than individually. A theoretical example is the culmination of disturbance from dust, noise, vibration, artificial light, human presence, and visual intrusion on sensitive fauna (e.g. certain bat species) adjacent to a construction site.

1.6.16 A search of other developments was undertaken in August 2024. This included operational wind farms, those under construction, consented sites, those under determination, and those deemed reasonably foreseeable (i.e wind farm sites at scoping stage). Cumulative wind farms within 20 km are illustrated in **Figure 5.15 (EIAR Volume 2).** Statutory consultees including the Energy Consents Unit (ECU), Perth And Kinross Council (PKC), and NatureScot were consulted on the proposed list of other developments. Details on all consultation responses are provided in **TA 1.2: Consultation Register (EIAR Volume 4**).

1.6.17 Potential wind farm sites at the scoping stage (i.e. those that have not submitted a formal application) are typically not considered, given the uncertainty associated with such sites. However, there are variations between guidance documents, professional judgement, and therefore technical assessments. For example, **Chapter 5: Landscape and Visual (EIAR Volume 1)** has captured the proposed Glen Lednock Wind Farm (scoping stage) due to its close proximity to Site.

1.6.18 Details on the assessment approach for each specialist topics is provided within the relevant chapter (**Chapters 5-14, EIAR Volume 1**) and the associated TAs (**EIAR Volume 4**).

Additional Mitigation

1.6.19 The impact assessment is used to identify where additional mitigation is required to address likely significant effects, where it has not been possible to avoid the effect through design of the turbine or infrastructure layout or through best practice. Mitigation has been considered following a hierarchy of first seeking to avoid effects, followed by seeking a reduction in effects to a level not considered significant, and finally where necessary and possible, offsetting, or compensatory measures are considered.

Statement of Competence

1.6.20 In accordance with regulation 5(5) of the EIA Regulations, by appointing Ramboll UK Limited (Ramboll) the Applicant has ensured that the EIAR has been prepared by 'competent experts'. The EIAR has been compiled and approved by professional EIAR practitioners at Ramboll, holding relevant undergraduate and post-graduate degrees, membership of the Institute of Environmental Management and Assessment (IEMA) and Chartered Environmentalist status with the Society for the Environment. The EIAR meets the requirements of the IEMA EIA Quality Mark Scheme. This is a voluntary scheme operated by IEMA that allows organisations to make a commitment to excellence in EIA and to have this commitment independently reviewed on an annual basis.

1.6.21 The project team comprises the companies presented in **Table 1-1** below. Professional qualifications for the lead author of technical reports are included in **TA 1.1 (EIAR Volume 4)** and each of the impact

assessment chapters provides details of the relevant professional memberships of the author, code or practice followed and assessment methodology used.

Table 1-1: Project Team

Discipline	Organisation
Lead EIA Consultant	Ramboll
Landscape and Visual Assessment	OPEN
Noise	Hayes McKenzie
Ecology	MacArthur Green
Ornithology	MacArthur Green
Geology, Peat, Hydrology and Hydrogeology	SLR
Cultural Heritage	CFA Archaeology
Socio-economics, Recreation and Tourism	Biggar Economics
Traffic and Transport	Pell Frischmann
Television and Radio	Pager Power
Aviation	Coleman Aviation

1.7 Copies of the EIAR

1.7.1 Hard copies of the EIAR will be made available for viewing at the following location:

- St Fillans Village Store

1.7.2 This EIAR, including all figures, technical appendices and accompanying documents are available to view and download on the project website (https://www.sserenewables.com/onshore-wind/in-development/glentarken/) free of charge.

1.7.3 The application documents will be available via the Scottish Government Energy Consents Unit portal www.energyconsents.scot.and Perth and Kinross planning portal https://www.pkc.gov.uk/publicaccess.

1.7.4 The Applicant will work closely with the ECU to ensure all statutory consultees receive a physical copy of this EIAR upon request.

1.7.5 In the interests of sustainability, reference to the paperless version is strongly encouraged. For anyone who has difficulty accessing the documentation online, copies of the EIAR may be obtained from SSE Generation Limited (contact: SSE Generation FAO Karen Anderson, 1 Waterloo Street, Glasgow, G2 6AY or karen.anderson@sse.com) at a charge of £850 for a hard copy, or on electronic USB or DVD copies free of charge. Hard copies of a short Non-Technical Summary are also available free of charge.

1.8 Commenting on the Application

1.8.1 When the Application for the Proposed Development is lodged with Scottish Government the Applicant will advertise the Application in accordance with legislation in the following:

- a local newspaper for two successive weeks;
- a national newspaper for one week;
- the Edinburgh Gazette for one week; and
- on the Developers' application website at: sserenewables.com/glentarken

1.8.2 The Scottish Government will invite formal representations on the Proposed Development, which will be taken into account before any decision is reached on the Application. The advertisement will provide details of the date by which representations should be made.

1.8.3 Any representations in relation to the Application should be made to the Energy Consents Unit mailbox, at representations@gov.scot, or by post to The Scottish Government, Energy Consents Unit, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU. They should identify the Proposed Development and specifying the grounds for representation. Written or emailed representations should be dated, clearly stating the name (in block capitals), full return email and postal address of those making representations.