



Dalfad Wind Farm

Environmental Impact Assessment Report

Volume 1: Non-Technical Summary





Non-Technical Summary

Dalfad Wind Farm

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Basis of Report

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Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
AILV	Abnormal Indivisible Load Vehicle
ATC	Air Traffic Control
BDMP	Bird Disturbance Management Plan
BEL	Brockwell Energy Limited
BEMP	Biodiversity Enhancement Management Plan
BESS	Battery Energy Storage System
BMMP	Bat Mitigation and Monitoring Plan
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
CO ₂	Carbon Dioxide
EAC	East Ayrshire Council
EIA	Environmental Impact Assessment
GPA	Glasgow Prestwick Airport
HGV	Heavy Goods Vehicle
IEF	Important Ecological Feature
IEMA	Institute of Environmental Management and Assessment
IOF	Important Ornithological Feature
LiDAR	Light Detection and Ranging
L VIA	Landscape and Visual Impact Assessment
MW	Megawatt
NATS	National Air Traffic Services
NPF4	National Planning Framework 4
NTS	Non-Technical Summary
OEMP	Operational Environmental Management Plan
OBEMP	Outline Biodiversity Enhancement Management Plan
SEPA	Scottish Environment Protection Agency
SLR	SLR Consulting Limited
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
ZTV	Zone of Theoretical Visibility



1.0 Introduction

This document is the Non-Technical Summary (NTS) of the Environmental Impact Assessment (EIA) Report for Dalfad Wind Farm (hereafter referred to as the ‘Proposed Development’). This document provides information about the Proposed Development in non-technical language. For further information including full technical details of each of the environmental assessments that have been undertaken, please refer to the EIA Report.

Brockwell Energy Limited (hereafter referred to as ‘the Applicant’ or ‘BEL’) is applying to the Scottish Ministers for consent to construct and operate the Proposed Development in the East Ayrshire Council (EAC) administrative area. The Proposed Development would be constructed on land (the ‘Site’) centred on British National Grid reference NS 62781 21809, approximately 4 km north-east of Cumnock. Refer to **Figure 1.1** for the Site location.

The Site is situated in a rural environment, characterised by agricultural land, forestry and former coal mining sites. The northern section of the Site includes the former Dalfad Coal Mine and part of the former Duncanziemere Coal Mine. Since mining operations ceased in 2013, some restoration has occurred, but significant opportunities for restoration and betterment remain.

The Applicant, is a renewable energy development company based in Scotland, with headquarters in Edinburgh. BEL’s main business areas are development of onshore wind, solar and battery energy storage systems. BEL is the developer of the North Kyle Energy Project in East Ayrshire and the proposed Breezy Hill Energy Project, also in East Ayrshire, for which an application for consent was recently submitted to the Energy Consents Unit. These projects exemplify BEL’s strategy to use renewable energy development to further restore and enhance former coal mining landscapes. BEL has also developed two energy-from-waste facilities; one at Earl’s Gate Energy Centre, Grangemouth, and one at Westfield, Fife. Since 2018, the Applicant has successfully delivered over £1 billion of projects across the UK.

1.1 Approach to EIA

The full explanation of the EIA process for the Proposed Development, including statutory guidance and stakeholder engagement, is provided in Volume 4, Technical Appendix 1.1 of the EIA Report.

The EIA process for the Proposed Development has informed decision-making by identifying the potential significant environmental effects of the Proposed Development. The EIA has been conducted in accordance with the requirements of the EIA Regulations and relevant best practice guidance.

The purpose of the EIA process is to assess the likely environmental impacts and identify appropriate mitigation measures to avoid, reduce, or offset any significant adverse effects. The assessment has been carried out as part of an iterative design process, which allowed the findings of the EIA to inform the design of the Proposed Development and ensure that environmental considerations were integrated at every stage.

Reporting of the EIA follows a structured format, including this Non-Technical Summary, the main EIA Report text, technical appendices, and accompanying figures. It covers all aspects of the environment that may be affected by the Proposed Development, including but not limited to ecology, hydrology, landscape and visual impacts, traffic and cultural heritage.

The EIA process has been conducted with input from statutory consultees such as SEPA and NatureScot, other interested organisations, and the public. The Applicant engaged with all relevant stakeholders throughout the EIA Scoping and consultation phases to ensure that key environmental issues were identified and addressed in the EIA Report.



The overall aim of the EIA is to provide Scottish Ministers with the necessary information to make an informed consenting decision about the Proposed Development, ensuring that environmental impacts are appropriately considered alongside the benefits of renewable energy generation.

2.0 Description of the Development

The full description of the Proposed Development, including further details on the wind turbines, BESS, supporting infrastructure and environmental considerations, is provided in **Volume 2, Chapter 2** of the EIA Report.

The Proposed Development will have a maximum installed capacity of 120 MW, comprised of:

- up to 14 wind turbines, nine of which will be up to 200 m to tip, with the remaining five being 149.9 m to tip, capable of generating approximately 80 MW; and
- a battery energy storage system (BESS) of up to 40 MW storage capacity.

In addition to the turbines and BESS, the Proposed Development will include ancillary infrastructure such as turbine foundations, an onsite substation and underground cables. Temporary infrastructure required for construction would include three temporary construction compounds, blade laydown supports and a concrete batching plant. Refer to **Figure 1.2** for the layout of the Proposed Development.

The Proposed Development will also provide various enhancement measures. It would support the continued restoration of former opencast mining land, including enhancement of previously disturbed areas within the former Dalfad and Duncanziemere Coal Mines.

Biodiversity enhancements will be implemented during the life of the project. Specific biodiversity enhancement proposals and their locations will be developed through discussions with the Applicant, landowner, and relevant technical specialists in order to enhance, create and connect habitats of biodiversity value. Based on the existing knowledge of the Site, biodiversity enhancement measures for the Proposed Development may include, but not be limited to, riparian and wildflower meadow planting, broadleaf woodland planting, creation of more diverse, species-rich scrub, and habitat enhancement for waders. Refer to Chapter 6: Ecology for more detail.

Access and recreation enhancements would form an important part of the Proposed Development. Existing and new wind farm tracks would be made available for public access, creating a network of walking and cycling routes across the Site.

It is likely that a heritage trail with interpretation boards be developed at the Site as part of an outdoor access management plan to enable recreational visitors to understand and gain an appreciation of the history of the Site.

The development will produce enough renewable energy to power approximately 84,400 homes annually, contributing significantly to national renewable energy targets.

The wind turbines would include technology to meet air navigation requirements. Further measures, such as micro-siting, will allow flexibility in precise turbine placement to respond to environmental sensitivities and ground conditions identified during construction.

The physical connection of the Proposed Development to the National Grid does not form part of the application for consent. However, to allow the assessment of the likely significant effects of the grid connection, an indicative grid connection route has been identified based on reasonable assumptions and current information.

The operational life of the Proposed Development would be 40 years from the date of commissioning of the wind turbines.



3.0 Site Selection and Design Process

The full explanation of the Site selection and design process for the Proposed Development, including constraints analysis and design iterations, is provided in Chapter 3 of the EIA Report.

The Proposed Development followed a rigorous site selection and design process to ensure the optimal location of turbines and infrastructure while minimising environmental impacts. Part of the site selection and design process was to identify environmental designations and potential sensitive receptors. Key environmental issues and constraints for consideration in the site selection and design process were established through a combination of desk-based research, extensive field survey and consultation (through the EIA Scoping process and additional consultation with key consultees).

The design process was iterative, incorporating feedback from environmental studies, consultations with statutory bodies, technical design reviews and public engagement. This process led to a series of six distinct design iterations, evolving from an initial layout of 17 turbines, all with a tip height of 200 m, to the final proposal of 14 turbines, with five turbines reduced in height and access arrangements amended to avoid environmental constraints.

Throughout the design process, a range of environmental and technical considerations influenced the evolution of the layout. Environmental considerations included peat depth, watercourses, ecology, ornithology, landscape and visual effects, cultural heritage and residential amenity. Engineering and technical considerations included wind resource, turbine spacing requirements, site access, construction constraints, grid connection requirements and the overall operational efficiency of the Proposed Development.

Alternative turbine heights, layouts, and access options were explored to ensure that the Proposed Development would maximise energy generation while minimising environmental effects where practicable. The final layout seeks to achieve a balance between renewable energy production, environmental protection and long term restoration and enhancement of the Site.

4.0 Environmental Impact Assessment

4.1 Overview

The EIA considered the potential effects of the Proposed Development during construction, operation and decommissioning. Specialist assessments were undertaken covering:

- Landscape and Visual Amenity;
- Cultural Heritage and Archaeology;
- Ecology;
- Ornithology;
- Geology, Hydrogeology, Hydrology and Peat;
- Noise;
- Access, Traffic and Transport; and
- Aviation and Radar.

The assessments considered the existing environmental conditions, identified potential effects and incorporated mitigation measures where required. Through the iterative design process, environmental constraints and consultation responses influenced the final design of the Proposed Development.

The key findings of each environmental topic are summarised in the following sections.



4.2 Landscape and Visual Amenity

The Landscape and Visual Impact Assessment (LVIA) considered how the Proposed Development would affect the character of the landscape and the views experienced by people living, working, travelling and undertaking recreational activities in the surrounding area. The assessment also considered the effects of aviation lighting on the turbines at night time and the potential cumulative effects with other wind farm developments.

Residential visual amenity is not considered within the LVIA, and is instead included in Technical Appendix 4.4 of the EIA Report, forming a separate assessment.

The LVIA was informed by desk-based studies, published landscape character information, local landscape designations, mapping and zone of theoretical visibility (ZTV) analysis, together with field work surveys undertaken during March, May and July 2026. A study area extending up to 25 km from the Proposed Development was used to identify landscape and visual receptors and 16 representative viewpoints were agreed through consultation with statutory consultees to assess potential effects.

The Site is located within a landscape influenced by a mixture of open moorland, restored former opencast mining areas, agricultural land and commercial forestry. Existing and consented wind farms are already present within the wider area, particularly to the north, east and south of the Site. The nearest settlements include Cronberry, Lugar, Logan, Cumnock, Auchinleck, New Cumnock and Muirkirk.

Landscape and visual considerations formed an important part of the iterative design process. Turbine locations and heights were refined to take account of landscape character, views from nearby settlements and roads, and potential effects on residential amenity. The majority of turbines have been positioned within the larger scale plateau moorland landscape, avoiding more sensitive landscape features where practicable. To minimise night-time effects, only three turbines would require visible aviation lighting, and these lights would be dimmed during periods of good visibility in accordance with aviation requirements.

The assessment identified significant landscape effects within the East Ayrshire Plateau Moorlands and Upland River Valley landscape character types in and around the Site. Significant visual effects would occur mainly within the closest surrounding areas, including the Glenmuir and Bellow Water Valleys; Cronberry; the rural area between Cronberry, Auchinleck and Cumnock; and sections of the B743 and the A70. Significant effects were also identified for the Uplands and Moorlands Local Landscape Area.

Further from the Site, effects would reduce with distance, and the assessment concluded that effects on surrounding settlements including Lugar, Logan, Cumnock, Auchinleck, Smallburn and Muirkirk, as well as recreational areas such as the Ayr River Way and visitors to Dumfries House, would not be significant. No significant effects were identified for other landscape character areas of designated landscapes within the wider study area.

Night-time assessment considered the effects of aviation lighting being installed on three of the turbines. Significant night-time visual effects were identified for receptors closest to the Site, particularly within the Glenmuir Water and Bellow Water valleys and at Cronberry. For other settlements and areas within the wider study area, night-time effects were assessed as not significant.

The assessment also considered the potential cumulative effects of the Proposed Development alongside other proposed wind farms in the area, including The Drum and Glen Water developments. Significant cumulative effects would be limited to a small number of nearby visual receptors already experiencing significant effects from the Proposed Development alone. Cumulative effects on landscape character and designated landscapes were assessed as not significant.



Overall, while significant landscape and visual effects would occur in areas close to the Proposed Development, particularly where views are open and the turbines would form prominent new features in the landscape, effects reduce with distance and are generally not significant in the wider area.

4.3 Archaeology and Cultural Heritage

EIA Report Chapter 5 considers the archaeological and cultural heritage resource within the Site and surrounding landscape and assesses the potential for likely significant effects arising from the construction, operation and decommissioning of the Proposed Development. The assessment considers both known heritage assets and the potential for previously unrecorded archaeological remains to survive within the Site. It also considers potential effects on the settings of designated heritage assets located within the wider study area.

The assessment was informed by a desk-based assessment, consultation with Historic Environment Scotland, a site walkover survey undertaken in June 2026, a review of historic mapping, aerial photography, LiDAR data and Historic Environment Record information, and an assessment of designated heritage assets within 10 km of the proposed turbines.

No designated heritage assets are located within the Site. The cultural heritage baseline is characterised by evidence of prehistoric, medieval, post-medieval and modern activity. The southern part of the Site contains limited evidence of earlier activity, including a prehistoric cist burial and medieval boundary features. The northern part of the Site contains extensive evidence of post-medieval industrial activity associated with coal mining, quarrying, lime production and rail infrastructure. However, much of this archaeological resource has been removed or substantially altered by modern opencast mining activity. The walkover survey confirmed that several previously recorded assets survive only as fragmentary remains, while others are no longer visible on the ground.

The Site is predominantly underlain by mineral soils, with localised areas of peat. While peat has the potential to preserve archaeological and paleo-environmental remains, its extent across the Site is limited. The southern areas of the Site are generally less affected by modern ground disturbance and therefore retain a greater potential for the survival of previously unrecorded archaeological remains.

The assessment identified a number of known and potential archaeological remains that could be affected by construction activities. Known assets within the Site include the remains of a racecourse, an aerial ropeway, the mineral railway and the former Gass Water Lime Works. Potential impacts on unknown archaeological remains were also considered. Appropriate archaeological mitigation, including implementation of a Written Scheme of Investigation, archaeological recording and a protocol for unexpected discoveries, would ensure that there are no significant effects during construction.

An assessment of the effects of the operational wind farm on the settings of designated heritage assets was undertaken using a Zone of Theoretical Visibility (ZTV), site visits and visualisations. Eight heritage assets were identified as requiring detailed assessment: Kyle Castle, Cairn Tables, Dumfries House (including separately the building, and its garden and landscape), the Dovecote at Dumfries House, Avenue Bridge, The Temple, and Sorn Castle.

Minor but not significant adverse effects were identified for Kyle Castle and Cairn Tables. No significant effects were identified for the Dumfries House building or its garden and landscape, The Temple, Dovecote at Dumfries House, Avenue Bridge, or Sorn Castle.

A cumulative assessment was undertaken to consider the Proposed Development alongside other consented, proposed and emerging wind energy developments within the surrounding landscape. The assessment concluded that, while the Proposed Development would add to the cumulative wind farms developments visible within the settings of the assets assessed for potential impacts, it would generally be experienced as a coherent extension to existing or



proposed turbine groupings. Cumulative effects would therefore not increase the significance of effect identified as a result the Proposed Development in isolation. Therefore, no significant cumulative effects were identified.

Effects during decommissioning are expected to be no greater than those identified during construction. Any decommissioning works would be undertaken in accordance with best practice guidance and appropriate mitigation measures in place at the time.

Overall, the assessment concludes that the Proposed Development would not result in any significant effects on archaeological remains, cultural heritage assets or their settings during construction, operation, decommissioning or cumulatively. The Proposed Development is therefore considered compliant with relevant legislation, policy and guidance, including National Planning Framework 4, the Historic Environment Policy for Scotland and the cultural heritage policies of the East Ayrshire Local Development Plan.

4.4 Ecology

The ecology chapter evaluates the potential for significant effects of the Proposed Development on ecology and upon important ecological features (IEFs) identified during desk study and survey work. It details the methods used to establish the habitats, species and populations present, together with the process used to determine their nature conservation value and conservation status. The ways in which IEFs might be affected (directly or indirectly) by the construction and operation (including cumulatively) of the Proposed Development are explained and an assessment is made with regards the significance of these effects.

Desk based studies and an extensive suite of field surveys have been carried out in and around the Proposed Development over respective Study Areas to establish baseline conditions and the species and populations present.

Assessment of effects on some habitats and species of higher nature conservation value was not required because of their ecology, absence, distance from the Proposed Development, small numbers, low levels of activity and/or the nature and location of the proposed turbines and infrastructure.

Statutory and non-statutory designated sites and ancient woodland are present locally; however, no significant effects are predicted.

Baseline habitat surveys indicate that much of the Site is comprised of agriculturally improved grassland, marshy grassland, and habitats associated with the Site's opencast mining legacy. A small number of other habitat types are present, including peatland habitats, although these are modified or degraded.

Baseline field surveys have established that the Site and immediate surrounding area is used by Atlantic salmon, bats, otter, trout and potentially water vole. With the exception of high collision risk bat species, the risk to protected species is considered to be negligible to low.

The Proposed Development has been designed to minimise impacts on important habitats and protected species as far as practicable. Mitigation measures included as part of the design, and good practice mitigation measures as standard, will enable the protection of protected species during the construction works.

The most tangible effect during the construction phase of the Proposed Development will be direct habitat loss and potential indirect habitat loss or modification due to the construction of new infrastructure. Effects upon blanket bog and wet modified bog were assessed but no significant effects are predicted.

Four high collision risk bat species/genus were recorded within the Site. The operational collision risks to these species were assessed but no significant effects are predicted.



Although no significant effects are identified, additional mitigation in the form of a post-construction Bat Mitigation and Monitoring Plan (BMMP) is proposed to further reduce any potential effects to bats.

The Proposed Development provides an opportunity to deliver long-term beneficial habitat enhancement, including specific restoration and management for native broadleaved and riparian woodland creation and enhancement, species-rich scrub creation and a variety of grasslands. These proposals form the basis of the Outline Biodiversity Enhancement Management Plan (OBEMP) which will deliver significant biodiversity enhancement at the Site.

Any adverse effects during construction and operation upon IEFs are predicted to be not significant as a result of the Proposed Development alone, or cumulatively, with any other wind farm development.

4.5 Ornithology

Chapter 7: Ornithology considers the potential for significant effects upon Important Ornithological Features (IOFs) associated with the construction, operation and decommissioning of the Proposed Development.

Baseline conditions to inform the design and assessment of the Proposed Development have been established through a desk study and ornithological field studies in accordance with standard industry guidance and consultation with statutory consultees and non-statutory specialist species recording groups.

Baseline studies have established that the ornithology study area is used by breeding peregrine and barn owl. Red kite was recorded as probably breeding in 2024. A roost involving a single hen harrier was recorded in the 2024/25 non-breeding season. Additional raptor IOFs recorded during baseline studies included osprey, goshawk, merlin and short-eared owl. Breeding wader territories within the study area involved curlew, lapwing and ringed plover. Black grouse were not recorded lekking within the study area in any baseline surveys.

All species of recorded wildfowl involved low levels of activity, while of the five species of gull observed, flight activity surveys recorded 31 flights of herring gull. This corresponds to a negligible collision risk, and there was no need to assess any gull species further.

As part of the iterative design process, mitigation measures were developed to avoid or reduce potential negative effects on IOFs where possible. This includes establishment of species-specific disturbance buffers for barn owl, hen harrier, peregrine and red kite.

Pre-construction checks would be carried out and a Bird Disturbance Management Plan (BDMP) will be implemented by a suitably qualified Ecological Clerk of Works. The BDMP will detail measures to ensure legal compliance and safeguard breeding birds known to be in the area and will include species-specific guidance. The BDMP shall include pre-construction surveys and good practice measures during construction.

Impacts arising during construction, operation and decommissioning are predicted as being negligible or minor, and not significant, for all IOFs.

Effects upon all IOFs are therefore predicted to be not significant as a result of the Proposed Development alone, or cumulatively with any other wind farm development.

The Site does not form part of any statutory designated site for nature conservation, and no likely significant effects are predicted on any Special Protection Areas or on any Site of Special Scientific Interest from an ornithological perspective.

Consideration of likely significant effects on IOFs of the grid connection is based on the assumed routing corridor and grid connection type. It assumes construction of an overhead line (OHL) to a point of connection at the consented Glenmuckloch substation) and the



proposed AIL route associated with the Proposed Development. No ornithological surveys have been undertaken specifically for the OHL corridor or AIL route. It is however noted that Muirkirk and North Lowther Uplands SPA./ SSSI lies within 500m of the OHL corridor.

It is assumed site based ornithological baseline surveys according to NatureScot guidance will be undertaken on the OHL route should the Proposed Development receive Section 36 consent. It is further assumed a Species Protection Plan (SPP) will be implemented during the construction phase, and an Operational Bird Protection Plan will be submitted to the Planning Authority. Additional mitigation, if required, would be in reference to NatureScot guidance. The preliminary appraisal of the OHL and grid connection route, when considering embedded design and proposed application of standard mitigation, therefore concludes that no significant effects in respect of ornithology are expected during construction and operation. The same conclusion is reached for the AIL route which does not overlap with any statutory or non-statutory designated sites and are generally involved agriculturally improved and intensively managed grasslands of low conservation value for IOFs.

4.6 Geology, Hydrogeology, Hydrology and Peat

Chapter 8: Geology, Hydrogeology, Hydrology, and Peat assesses the potential effects on geological (including peat), hydrogeological and hydrological receptors during construction and operation of the Proposed Development.

The scope of the assessment was informed by experience of the assessment authors and scoping responses received from statutory and non-statutory consultees.

Information for the assessment was compiled using baseline information from a desk based study which was verified by an extensive programme of field work. The assessment has considered the sensitivity of receptors identified during the baseline study, the mitigation measures incorporated in the development design, and good practice measures which will be implemented as standard. It has also considered potential future changes to baseline conditions that will arise from the effects of climate change.

The assessment is supported by Technical Appendices that consider potential effects on carbon-rich soils and peat, peat stability and peatland condition. Potential effects on nearby private water supplies and a schedule of watercourse crossings associated with the Proposed Development are also provided in supporting appendices.

The design of the Proposed Development has been informed by a detailed programme of peat probing and peat condition surveys as required by National Planning Framework 4 (NPF4). The assessment of peat and carbon-rich soils has considered all of the proposed infrastructure, including new and existing access tracks scheduled to be upgraded as part of the Proposed Development. It has been shown that areas of deep peat have been avoided and any areas of carbon-rich soils and peat disturbed by the Proposed Development can be readily and beneficially reused in restoration proposals on-site.

The Proposed Development will also not impact any water that sustains nearby private water supplies, areas of potential groundwater-dependent terrestrial ecosystems, or designated sites including Muirkirk Uplands SSSI.

Subject to the adoption of good practice measures and project specific environmental management plans, no significant adverse effects on geology, peat, hydrology and hydrogeology receptors have been identified during the construction and operation phases of the Proposed Development. The final Construction Environmental Management Plan (CEMP) would include provisions for drainage management plans and will be used to safeguard water resources and manage flood risk. A commitment to deploy Sustainable Drainage Systems (SuDS) in these plans has been made. The final CEMP will include provision of a Pollution Prevention Plan and would be agreed with statutory consultees including SEPA, East Ayrshire



Council (EAC) and NatureScot prior to any construction works being undertaken. Mitigation measures outlined in the final CEMP will also form measures to be adopted as part of a longer-term Operational Environmental Management Plan (OEMP), as required.

Notwithstanding these safeguards, a programme of baseline and construction phase water quality monitoring is proposed which would be used to confirm that the Proposed Development does not have a significant effect on the water environment. Monitoring would commence prior to construction and continue throughout the construction phase and immediately post construction. It is anticipated that the monitoring programme would be agreed with EAC post determination.

4.7 Noise

Potential noise effects from the construction, operation and decommissioning of the Proposed Development have been assessed. The assessment considered noise from construction activities and traffic, the wind turbines, the battery energy storage system and substation, and the proposed overhead line. It also considered potential combined effects with other relevant developments, particularly Glen Water Farm.

A background noise survey was undertaken between April and May 2026 at five residential locations around the Proposed Development: Whiteholm, Springhill Farm, Boghead, Stonebriggs and Nether Guelt. The existing sound environment is generally rural and varies with wind, vegetation, flowing water, birdsong, farming, road traffic and other local activity. The survey results were used to establish representative quieter background noise levels under different wind conditions and to set appropriate operational noise criteria for nearby homes.

No residential properties are located within 300 m of the main construction works. Predictions for the closest main works indicate that construction noise would remain below the applicable daytime criterion. Construction and decommissioning noise would be temporary and controlled through standard good-practice measures, including agreed working hours, appropriate selection and maintenance of plant, careful siting of equipment and temporary screening where necessary. Construction traffic would be controlled through a Construction Traffic Management Plan. The final overhead-line alignment has not yet been determined; where substantive works would occur close to a home, a location-specific assessment and suitable controls would be required before construction. Construction, construction-traffic and decommissioning effects would be minor adverse and not significant.

Operational wind turbine noise has been assessed both for the Proposed Development alone and together with other relevant wind developments. Without additional control, the daytime criteria could be exceeded at Laigh Glenmuir, Glenview Cottage and Low Garleffan under some wind conditions. The final turbine model will therefore be required to meet site-specific noise limits. A final operational noise management strategy will identify where quieter turbine operating modes are needed and will apply them automatically under the relevant wind conditions. No future financial-involvement arrangements at these properties are relied upon, but changes in financial involvement status would alter the resulting applicable noise limits at respective properties. During the design evolution process, the decision was made to take High Glenmuir out of residential use, should the Proposed Development gain Section 36 consent. With these strategies in place, predicted wind turbine noise would comply with the applicable day and night limits at all assessed homes. Operational wind turbine noise effects would be minor adverse and not significant.

The detailed equipment specification for the battery storage facility, substation and associated fixed plant is not yet available. These elements will be subject to limits-led acoustic design and a pre-installation assessment. Low-noise equipment, acoustic enclosures, attenuated ventilation, equipment orientation and screening will be incorporated where required to meet the applicable rating-level limits. Subject to these requirements, operational fixed-plant noise would have a minor adverse and not significant effect.



Potential combined construction, traffic, wind turbine and fixed-plant noise effects associated with the Proposed Development and Glen Water Wind Farm would also be minor adverse and not significant after the respective control measures are applied.

Overall, no significant noise effects are predicted during construction, operation or decommissioning, either individually or cumulatively.

4.8 Access, Traffic and Transport

The Access, Traffic and Transport chapter of the EIA Report considers the potential for likely significant effects of the vehicle movements generated by the Proposed Development on users of the surrounding transport network.

The nature of the Proposed Development is such that it would generate an increase in vehicle movements only while it is being built. During operation, it would generate only the occasional maintenance and inspection vehicle movements. Decommissioning would be too far into the future for a meaningful assessment to be made at present, but any likely impacts would be no greater than those identified for the construction phase.

The Site would be accessed from an existing access on the A70. General construction traffic (including Heavy Goods Vehicles (HGVs)) would be expected to use the A70 to and from the east and west, with the latter providing a route to the A76.

Some Abnormal Indivisible Load Vehicles (AILVs) would be needed to deliver the turbine components to the Site. It is envisaged that these components would be delivered from King George V Dock in Glasgow and AILVs would use the M77, A77, A76, Loganhill Road, Glenmuir Water Road, Glenmuir Road and the A70 to reach the Site. Some works would be required on Loganhill Road, Glenmuir Road and the A70 to create overrun areas to accommodate these vehicles.

The number of vehicles currently on the roads around the Proposed Development has been counted. The number of vehicle movements that would be generated by the construction of the Proposed Development has been estimated, based on calculations of the amount of materials and number of other items that would be needed.

The additional vehicle movements that would be generated during construction have been compared to the number of vehicles recorded in the surveys. The effects of those additional vehicle movements have been assessed in accordance with the guidance in the Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement.

The guidance states that the effects of traffic generated by a proposed development should be assessed by applying the following two “rules of thumb”:

- *“Rule 1 Include highway links where traffic flows will increase by more than 30% or the number of heavy goods vehicles will increase by more than 30%.*
- *Rule 2 Include highway links of high sensitivity where traffic flows have increased by 10% or more”.*

If the increase in traffic arising from a proposed development breaches either of these rules then the effects of that traffic should be assessed on the issues of severance, road vehicle driver and passenger delay, non-motorised user delay, non-motorised user amenity, fear and intimidation of and by road users, road user and pedestrian safety and hazardous / large loads.

The increase in vehicle movements that would arise from the construction of the Proposed Development breaches the relevant rule on only the section of the A70 in Muirkirk east of the B743. The effects of these vehicle movements on the above considerations were assessed and it was concluded that the additional vehicle movements would not have a significant effect



on users of the surrounding transport network, subject to appropriate measures implemented and controlled by a Construction Traffic Management Plan (CTMP).

The effects of the increase in vehicle movements that would arise from the Proposed Development have also been considered in combination with other developments that are planned but are unbuilt at the time of writing. This assessment also concluded that the additional vehicle movements would not have a significant effect on users of the surrounding transport network.

No significant effects are considered likely from the construction of the off-site works to create overrun areas for the AILVs or from the construction of an overhead line grid connection linking the Proposed Development to the proposed Glenmuckloch Substation, although these elements will be the subject of separate consent applications in due course.

4.9 Aviation and Radar

An assessment of the potential effects of the Proposed Development on aviation and radar facilities during the construction and operational phases has been undertaken. Decommissioning effects do not need to be assessed given these are similar to construction impacts.

Glasgow Prestwick Airport (GPA) is approximately 24.5 km northwest of the Site, and GPA Air Traffic Control provides radar services for aviation in the vicinity of the Site. National Air Traffic Services (NATS) has a licence obligation to provide radar data to aviation stakeholders such as the Ministry of Defence. Any potential impact that the Proposed Development might have on NATS radar systems, which cover the area of the Proposed Development, must be considered. If the proposed turbines would significantly adversely affect the radar systems, appropriate mitigation must be implemented.

Consultation between the Applicant and GPA is continuing with a view to reaching agreement on measures to maintain safe separation between turbines and aircraft. Agreement is being sought to provide the required minimum of 300 m separation between the highest turbine and all aircraft operating in the area. Discussions are also ongoing to agree measures to avoid significant interference with GPA's aeronautical communication and navigation systems.

NATS and GPA have each defined a set of mitigation solutions which would be subject to commercial agreements with the Applicant.

5.0 Benefits of the Proposed Development

The Proposed Development would provide a range of environmental, social and economic benefits. In addition to generating renewable electricity, it would contribute to the continued restoration and regeneration of former opencast mining land at Dalfad and Duncanziemere, providing long term benefits for local communities, biodiversity and the wider environment.

The Proposed Development would generate approximately 80 MW of renewable electricity, supported by a BESS of up to 40 MW. Together, these technologies would help support Scotland's transition to a low-carbon energy system, increase energy security and contribute towards national renewable energy and climate change targets. The Proposed Development is expected to generate sufficient electricity to power approximately 84,400 homes.

The Proposed Development would support the continued restoration and enhancement of former mining land through habitat creation and landscape regeneration. Biodiversity enhancement measures would be implemented across the Site, with opportunities including habitat creation, woodland planting and measures designed to improve habitat connectivity and support locally important species.

It would also provide long term recreation and access benefits. Existing and new tracks would be made available for public access, creating a network of walking and cycling routes across



the Site. These routes would include shelters, viewpoints and interpretation features designed to help visitors enjoy the landscape and learn about the natural environment and industrial heritage of the area.

The Proposed Development would deliver economic benefits during both construction and operation. Construction activities are expected to support employment, generate opportunities for local businesses and contractors, and contribute to the local and Scottish supply chain. Operational expenditure associated with maintenance and management of the Site would continue to support jobs and economic activity throughout the operational lifetime of the project.

The Applicant is committed to maximising opportunities for local businesses and workers through engagement with local suppliers, skills organisations and training providers. This would help support the development of skills and employment opportunities within the growing renewable energy sector.

The Proposed Development would also provide a long-term source of funding for local communities through a community benefit fund. Based on the current proposal, this could provide approximately £400,000 per year, equivalent to around £16 million over the 40-year operational life of the project, helping support community-led projects and local priorities.

Overall, the Proposed Development would contribute to Scotland's transition to net zero while supporting the regeneration of former coal mining land through renewable energy generation, habitat enhancement, improved public access, economic investment and long-term community benefits.

6.0 Availability of the EIA Report

Copies of the EIA Report have been made available for inspection by the public, notice of which has been published on the applicant's website, in the Herald, the Edinburgh Gazette, and the Cumnock Chronicle.

Printed copies of the NTS and EIA Report are available by request from:

Brockwell Energy Limited
The Eagle Building, Third Floor,
19 Rose Street,
Edinburgh,
EH2 2PR

Email: dalfad@brockwellenergy.co.uk

Online: <https://www.brockwellenergy.com/projects/dalfad-wind-farm/>

A printed copy of the EIA Report has been made available to view during regular opening hours at:

Cumnock Public Library
1 Greenholm Rd
Cumnock
KA18 1LH

Electronic copies of the EIA Report, including all figures, appendices and accompanying documents are available to view on the project website

<https://www.brockwellenergy.com/projects/dalfad-wind-farm/> and can be accessed at <https://www.energyconsents.scot/>.

Hard copies of this NTS are available free of charge, and hard copies of the EIA Report will be charged at £1,500 per copy. The price of the hard copy reflects the cost of producing the Landscape and Visual visualisations.



Alternatively, a USB copy can be made available on request at a charge of £15, by emailing dalfad@brockwellenergy.co.uk.

7.0 Conclusion

The proposed Dalfad Wind Farm represents a key contribution to Scotland's renewable energy targets, delivering approximately 80 MW of clean energy to power around 84,400 homes annually, and around 40 MW of energy storage capacity. It is expected to save over 4.9 million tonnes of CO₂ over the 40-year project lifespan compared to equivalent generation from fossil fuels, with an expected payback time of 1.1 years. By aligning with both national and local climate policies, the project supports the UK's commitment to net-zero emissions and Scotland's 2045 carbon reduction goals.

The Proposed Development has undergone a rigorous design process, incorporating feedback from statutory consultees, environmental studies, and public consultations. This iterative approach has ensured that potential impacts on local wildlife, habitats, and cultural heritage have been carefully assessed and mitigated.

Adverse effects which cannot be fully mitigated, e.g. visual effects from some local receptors, are considered acceptable in terms of Scotland's Fourth National Planning Framework (NPF4) which acknowledges that large-scale onshore wind developments may necessarily result in some adverse effects, but that those should be balanced against the advantages of such developments.

Throughout the development of the proposals, the Applicant has made the further restoration and improvement of the Site a main priority of the Proposed Development alongside the generation of renewable energy. The proposed enhancements include further restoration of the former Dalfad and Duncanziemere Opencast Coal Mines, biodiversity enhancements, and access and recreation enhancements which will likely include nature and heritage trails.

Public engagement has been an integral part of the development, allowing for local concerns to be addressed and for the project to offer tangible community benefits. These include the creation of jobs, opportunities for local businesses, and local biodiversity enhancement.

Overall, the proposed Dalfad Wind Farm demonstrates a sustainable and balanced approach to renewable energy development. It offers long-term environmental and socio-economic benefits while minimising impacts on the local landscape and ecosystems. This responsible project design ensures that Dalfad Wind Farm will contribute positively to the local community, the further restoration of former abandoned coal mining sites in East Ayrshire and the wider fight against climate change.





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