



IN
BY
FOR

SHETLAND

RAMBOLL

Neshion Energy Park

Environmental Impact Assessment Report

Volume 1: Non-Technical Summary

June 2026



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Non-Technical Summary (NTS)

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1. Introduction

1.1 Overview

Neshion Ltd (the Applicant) has applied for consent¹ to construction and operate Neshion Energy Park ('the Proposed Development'). The Proposed Development comprises of up to eight wind turbines with a maximum blade tip height of 200 metres (m) above ground level (agl), a Battery Energy Storage System (BESS) and associated infrastructure on land (the Site) adjacent to Sullom Voe Oil Terminal (SVT) and the Shetland Gas Plant in Shetland, Scotland. The Site location is shown in **Figure 1: Site Location**.

An Environmental Impact Assessment Report (EIAR) has been prepared to accompany the application for consent. The EIAR provides the environmental information that Scottish Ministers must take into account when considering a decision to grant consent under the Electricity Act 1989 or directing that planning permission be deemed granted. This document provides a Non-Technical Summary (NTS) of the EIAR.

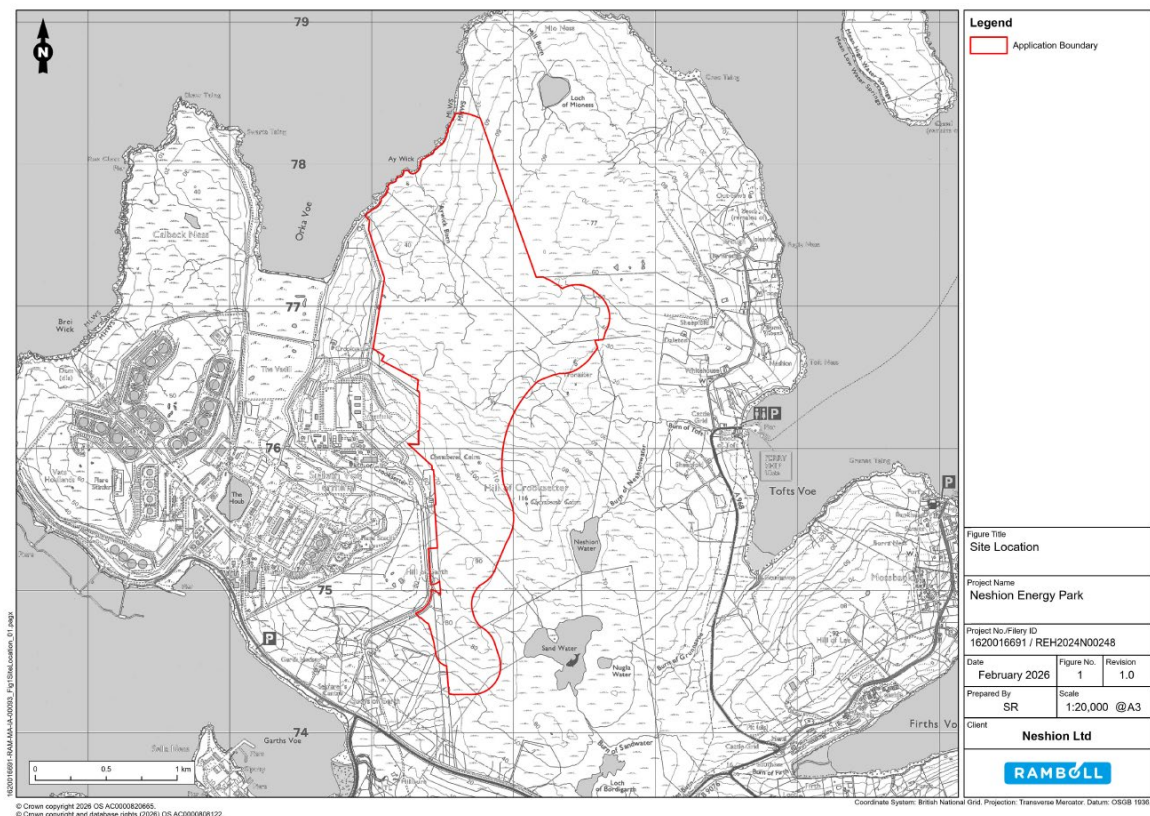


Figure 1: Site Location

¹ An application for consent for the Proposed Development will be made to the Scottish Ministers under section 36 of the Electricity Act 1989, along with a request for a direction that planning permission be deemed to be granted under section 57(2) of the Town and Country Planning (Scotland) Act 1997 as amended.

1.2 Purpose of the Non-Technical Summary

The aim of the NTS is to summarise the content and main findings of the EIAR in a clear and concise manner to assist the public in understanding the design of the Proposed Development, what the predicted likely significant environmental effects of the Proposed Development would be and any mitigation measures proposed. For full details refer to **EIAR Volumes 2 – 4**.

The EIAR comprises the following volumes:

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

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

- Planning Statement (presenting an assessment of the Proposed Development against relevant policy);
- Design and Access Statement (summarising the design principles and concepts that have been applied to the Proposed Development);
- Pre-Application Consultation (PAC) Report (providing more detail on engagement with relevant stakeholders); and
- Socio-economic Statement (providing more detail on the benefits of the Proposed Development).

1.3 EIA Process

EIA is a procedure designed to identify the potential environmental effects, both beneficial and adverse, of a proposed development, and where possible, identifies mitigation to avoid, reduce and offset potential significant adverse environmental effects. The EIA process adopted for the Proposed Development has followed best practice guidelines established by the Institute of Sustainability and Environmental Professionals (ISEP) through its Quality Mark Scheme.

Receptors, which is a person, community, species, habitat, ecosystem, property or environmental resource that could be affected by a proposed development, are identified in the EIA process. It is receptors that have the potential to be affected by impacts of a proposed development and whose sensitivity is considered when assessing the significance of those impacts.

1.4 Copies of the EIAR

Paper copies of this NTS and the other volumes of the EIAR will be made available to view at the following publicly accessible locations:

- Shetland Islands Council, 8 North Ness House, Lerwick, Shetland, ZE1 0LZ; and
- Shetland Library, Lower Hillhead, Lerwick, Shetland, ZE1 0EL.

The EIAR, including all figures, technical appendices and accompanying documentation are available to view and download on the project website (<https://neshionenergypark.co.uk/>).

The application documents will be available from the Scottish Government energy consents portal (<https://www.energyconsents.scot/Default.aspx>) and Shetland Islands Council (SIC) planning portal (<https://pa.shetland.gov.uk/online-applications/>).

There may be a short delay (2-3 days) between the application documents being available online and at the publicly accessible locations above.

In the interests of sustainability, reference to the paperless (project website/ECU/SIC planning portal) version is strongly recommended. For anyone who has difficulty accessing the documentation online, a CD or USB copy will be made available free of charge. Hardcopies of the Non-Technical Summary can also be made available free of charge by contacting info@neshionenergypark.co.uk.

1.5 Commenting on the Application

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.

Any comments on the application should be made to the Energy Consents Unit <mailto:representations@gov.scot> via the Energy Consents website at www.energyconsents.scot or by post to The Scottish Government, Energy Consents Unit, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU, identifying the Proposed Development and specifying grounds for representation. Written representations should be dated, clearly stating the name (in block capitals), full return email and postal address of those submitting comments.

2. Consultation and Engagement

2.1 Scoping

A Scoping Opinion request accompanied by a Scoping Report was submitted to the Scottish Ministers in March 2025. The Scoping Report set out a summary of the proposals, identified the likely significant environmental effects, and summarised the proposed scope of the EIA.

A Scoping Opinion was received on 27th June 2025. The contents of this and other consultation responses received are summarised in **Technical Appendix 1.1: Consultation Register (EIAR Volume 4)**, along with a list of bodies consulted during the scoping exercise.

The scoping process allowed the EIA to focus on the main areas of interest raised by the various consultees. It was agreed that impacts which are not likely to result in significant effects could be scoped out of further assessment.

2.2 Public Engagement

The Applicant conducted two public engagement events to seek the views of the local community. Exhibitions were held as follows:

- 27th March 2025, Mossbank Public Hall (Mossbank Hall, Mossbank, Shetland, ZE2 9RB)
- 23rd September 2025, Mossbank Public Hall (Mossbank Hall, Mossbank, Shetland, ZE2 9RB)

For further information on the public engagement events refer to the standalone **Pre-Application Consultation (PAC) Report**.

3. Proposed Development

3.1 Site Location and Context

The Site covers an area of approximately 303 hectares (ha) and is located on land adjacent to SVT and the Shetland Gas Plant in Shetland, Scotland (approximate OS grid reference for the centre of the Site: HU 41688 76600).

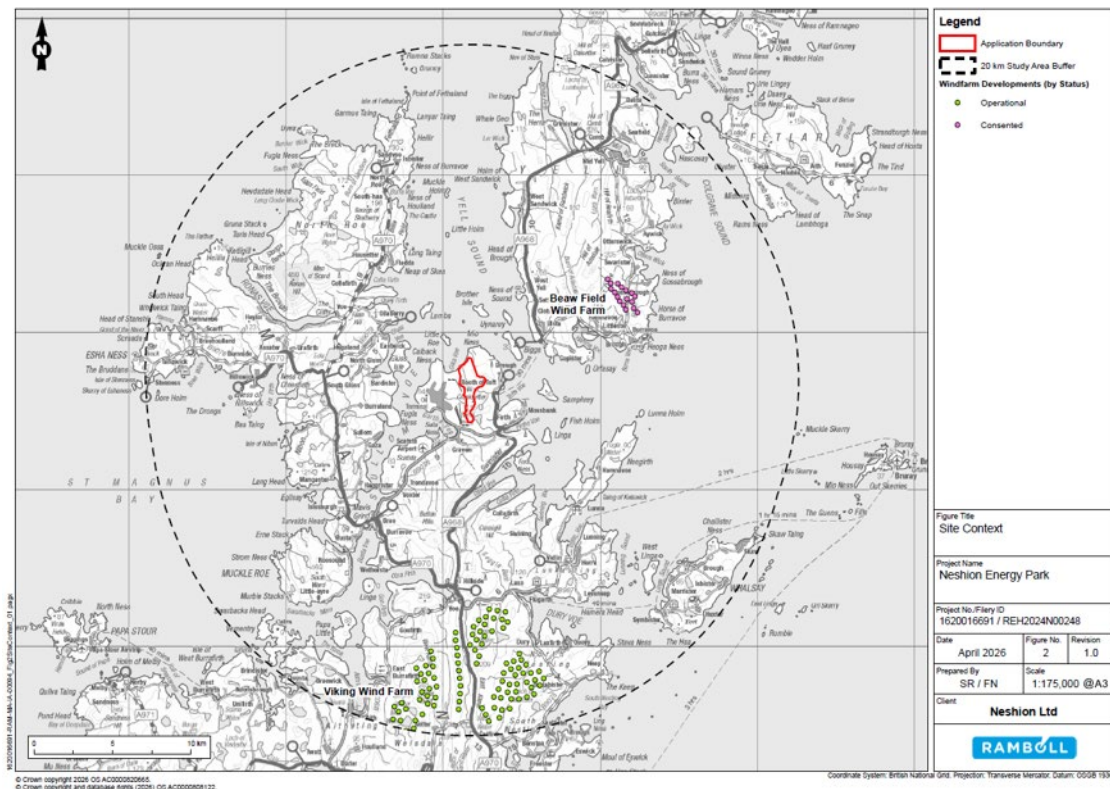


Figure 2: Site Context

As illustrated by **Figure 2: Site Context** there are two wind farms within 20 km of the Proposed Development, one operational (Viking Wind Farm) to the south of the Site and one consented (Beaw Field Wind Farm) to the north east of the Site.

Settlements within approximately 1.5 km the Site are limited to scattered dwellings, in areas such as Toft, Brough and Garths Voe. Small settlements such as Firth and Mossbank are located approximately 2.1 km and 2.7 km from the Site, respectively.

3.2 Applicant's Description

The Applicant's description of the Proposed Development is as follows:

Neshion Energy Park (the 'Proposed Development') is a renewable energy development situated to the east of Sullom Voe Oil Terminal (SVT) and the Shetland Gas Plant in the North Mainland of Shetland, Scotland - strategically positioned within an area that will play a central role in Shetland's transition from fossil fuels to clean energy technologies. Covering approximately 300 hectares, the Proposed Development comprises up to eight wind turbines with a maximum blade

tip height of 200 m above ground level (agl), a Battery Energy Storage System (BESS), access tracks, substation and areas for habitat management.

If consented, the impacts of the Proposed Development go beyond clean energy generation to tackle climate change and support energy security. The Proposed Development aims to provide Shetland's first Local Energy Discount Scheme to directly contribute to fuel bill reduction. Importantly, the Proposed Development can also be a catalyst for a clean fuels transition - supporting jobs and the sustainable future operation of Shetland's energy infrastructure by providing clean electricity to the neighbouring SVT e-fuels project.

3.3 Proposed Development

The Proposed Development is shown on **Figure 3: Site Layout** and includes the following key components:

- up to eight wind turbines with a maximum tip height of 200 m and a combined generation capacity of greater than 50 MW;
- permanent foundations supporting each wind turbine, and associated crane hardstanding at each wind turbine base;
- a total of approximately 7.5 km of new permanent on-site access tracks with associated watercourse crossings, and approximately 0.4 km of temporary access tracks to service the borrow pits during the construction phase;
- a site entrance to the west of the site for construction and operation, designed to accommodate abnormal indivisible loads (AIL) required for turbine component delivery;
- underground cable arrays within the Site connecting the turbines to the on-site substation;
- an on-site substation and control building;
- temporary construction compounds and laydown areas; and
- a BESS with a footprint of up to 0.5 ha, including ancillary equipment and co-located with the on-site substation.

In addition, the following ancillary works would be necessary:

- extraction of rock from borrow pits and reinstatement of the borrow pits to an agreed restoration design;
- temporary on-site concrete batching plant;
- off-site works to facilitate the delivery of abnormal loads (e.g. construction of over-run areas and temporary modification to street furniture etc); and
- permanent hardstanding to accommodate remote sensing equipment for measuring wind conditions (to be co-located with the on-site substation and BESS).

Biodiversity and habitat management measures for the Site may include, but are not limited to, peatland restoration, riparian tree/scrub planting, creation of artificial otter holds, removal of waste along coastline and creation of wader scrapes.

The locations of the proposed turbines and other infrastructure would be subject to 'micrositing'. This process allows for minor changes in turbine or infrastructure locations to respond to possible local variations in ground conditions across the site, which would only be confirmed following detailed site investigation work carried out immediately prior to construction. This process also provides scope for further mitigation of localised potential environmental effects through avoidance of sensitive features. It is anticipated that the micrositing distance of 100 m would

form a condition accompanying any consent. Any repositioning would be carried out under the supervision of an ecological clerk of works (ECoW) and an appropriately experienced and qualified engineer with the objective of optimising the design and implementing the mitigation hierarchy to avoid and minimise new or additional significant environmental effects.

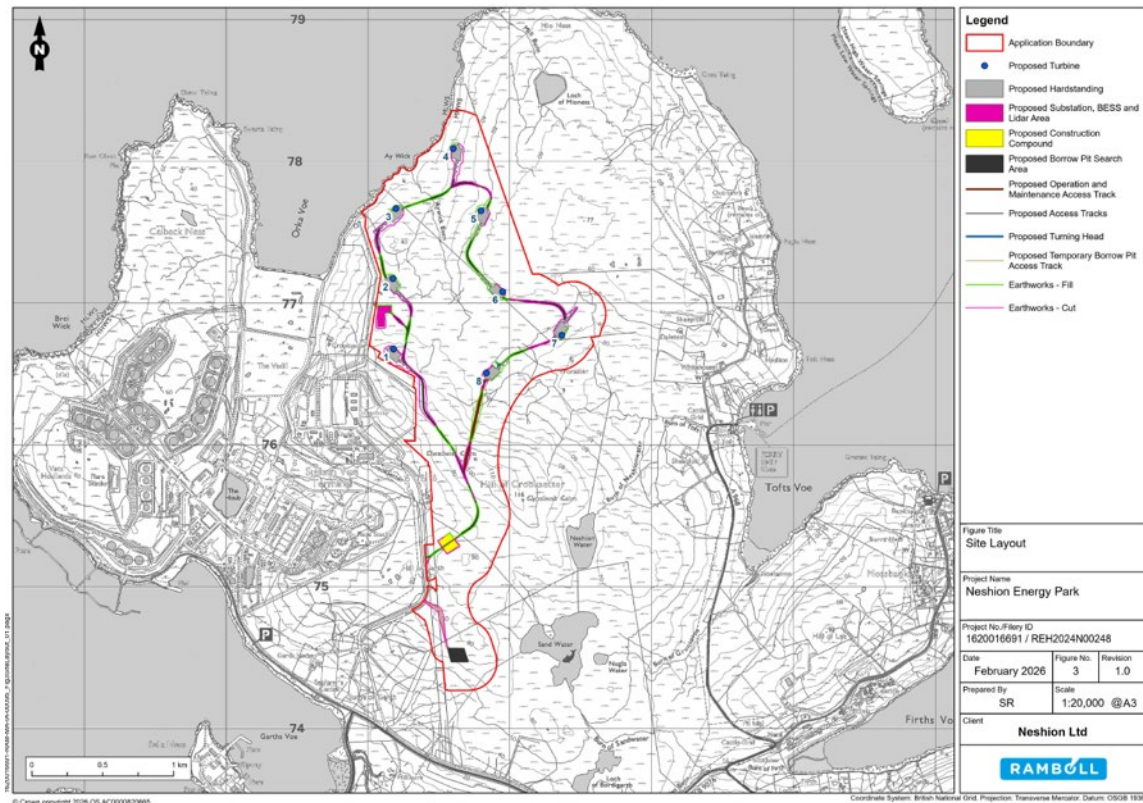


Figure 3: Site Layout

It is proposed that all eight turbines will be fitted with steady red lights (visible to the human eye) and infra-red lights (not visible to the human eye) on the nacelles.

In addition to lighting on the turbines themselves, low-level security lighting at the substation and BESS would also be required.

The Proposed Development would potentially have both a 'private-wire' connection to the neighbouring SVT to supply a low carbon fuel plant at the terminal, and a connection to the electricity grid. The details of both connections are currently unknown and do not form part of the Proposed Development for purposes of the application for consent; however it is acknowledged that to assess the combined effects of the Proposed Development as a whole, there is a need to consider the potential for likely significant effects in combination with the associated connection infrastructure, in so far as it is possible to do so based on the information available at the time of writing.

Therefore, an appraisal of the grid connection and private wire connection has been prepared and is included in **Technical Appendix 2.4: Electricity Connection Infrastructure Appraisal (EIAR Volume 4)**. The appraisal is based on reasonable assumptions of the connection points and routes at the time of writing.

3.4 Construction Activities

The Construction of the Proposed Development would take approximately 24 months.

The typical construction hours of work would be Monday to Saturday 0700 to 1900 and Sunday 0700 – 1600. No works, with the exception of completing concrete pours, turbine delivery, the completion of turbine erection or emergency work, would take place outside these hours, and any such out-of-hours works would be subject to prior agreement with SIC.

A Construction Traffic Management Plan would be agreed in consultation with SIC and Transport Scotland. This would address the scheduling, routing and overall management of abnormal loads movements along with the programming and management of all other HGV movements.

A Construction Environmental Management Plan (CEMP) would be implemented during construction to avoid, reduce or control associated adverse environmental effects. An Outline CEMP has been produced and submitted as part of the application submission. The CEMP would, as a minimum, include details of:

- construction methodologies;
- pollution prevention measures;
- public liaison provision;
- peat slide, erosion and compaction management;
- control of contamination/pollution prevention;
- drainage management and SuDS;
- water quality monitoring;
- management of construction traffic;
- control of noise and vibration; and
- control of dust and other emissions to air.

3.5 Operation Management and Maintenance

The expected operational life of the Proposed Development is 40 years from the date of commissioning.

Wind turbines and wind energy projects are designed to operate largely unattended. Each turbine at the Proposed Development would be fitted with an automatic system designed to supervise and control a number of parameters to ensure proper performance (e.g. start-up, shut-down, rotor direction, blade angles etc.) and to monitor condition (e.g. generator temperature).

The control system would automatically shut the turbine down should the need arise. Sometimes the turbines would restart automatically (if the shut-down had been for high winds, or if the grid voltage had fluctuated out of range), but other shutdowns (e.g. generator over temperature) would require investigation and manual restart.

The wind turbines, substation, control room and ancillary infrastructure would be subject to ongoing maintenance throughout the operational life, with regular visits by wind turbine technicians and other staff and contractors.

3.6 Operational Use of Natural Resources, Residues and Emissions

Once operational the Proposed Development will have no likely significant effects resulting from the use of natural resources as there will be no significant resource use required (other than the wind).

The EIAR provides further information on the likely emissions of light and noise. Under current regulations an agreed scheme of aviation lighting will be required. Wind turbines emit noise; however, the emissions will be managed in accordance with agreed limits to avoid likely significant effects.

3.7 Decommissioning

At the end of the project's operational life, a decision will be made as to whether to decommission or repower the turbines. If repowering were to be chosen, relevant consent applications would be made. If a decision were to be taken to decommission the Proposed Development, this would be anticipated to comprise the dismantling and removal of the turbine components, transformers, substation and BESS. Subject to agreement and further evaluation of the best environmental option, access tracks and underground cables would be either left in place, partially removed or removed entirely. It is anticipated that foundations would be removed to a depth of 0.5 m below ground level to avoid environmental effects from removal.

Detailed decommissioning proposals would be established and agreed with relevant authorities prior to commencement of decommissioning activities. This would take cognisance of guidance available at the time. A Decommissioning Plan would set out environmental protection measures and restoration principles which will be implemented. This plan will be agreed with the SIC.

A detailed assessment of the decommissioning of the Proposed Development has not been undertaken as part of the EIA as: i) the future baseline conditions (environmental and other developments) cannot be predicted accurately at this stage, and ii) the proposals for refurbishment/decommissioning and the future regulatory context are not known at this stage. However, an outline decommissioning strategy is included in the Outline Construction Environmental Management Plan. It is considered that effects predicted for the construction phase are generally representative (or worse) of the type of effects that would be expected during the decommissioning phase.

4. Site Selection and Design Evolution

4.1 Site Selection Considerations

4.1.1 Current Land Use and Site Context

The Site, as defined by the application boundary, as shown on **Figure 1: Site Location**, comprises a combination of open heather moorland and grassland on peaty soils, which is used for rough grazing. The Site borders with a large industrial site to the east comprising the SVT and Shetland Gas Plant and associated infrastructure.

The Site sits within the area defined under the proposed Sullom Voe Development Framework. The Framework² is being developed collaboratively by a group of developers and other stakeholders in consultation with landowners, communities, local businesses and other interested parties, with input from Shetland Islands Council (SIC), government agencies and advisors – including NatureScot, the Scottish Environmental Protection Agency (SEPA), Historic Environment Scotland (HES) and Scottish Water. The Framework seeks to maximise the benefits of future energy development in Shetland while helping to reduce impacts by concentrating development in an already industrialised area and avoiding the proliferation of new infrastructure elsewhere in Shetland. The Development Framework will be considered by SIC and, if adopted, will constitute non-statutory supplementary guidance to be considered alongside the Local Development Plan.

4.1.2 Site Selection and Feasibility

The Site was chosen for wind farm development for a number of reasons:

- The Site is situated next to an industrial hub (SVT and Shetland Gas Plant), within an existing industrialised landscape and close to potential high-demand customers for renewable electricity;
- The Site is located in close proximity to potential grid connection infrastructure (the Northern Substation Hub proposed by Scottish & Southern Electricity Networks (SSEN Transmission));
- The Site is in an area identified as suitable for future energy development within the Sullom Voe Development Framework;
- The Site is outwith areas identified within the National Planning Framework 4 (NPF4) as unsuitable for wind development, e.g. National Scenic Areas and National Parks;
- The Site has suitable space, topography and gradient to accommodate a wind farm and associated infrastructure;
- The Site has consistently high anticipated wind speeds, which will deliver excellent wind energy yields; and
- There is scope to deliver suitable access to the Site for both construction traffic and abnormal indivisible loads (AIL) whilst avoiding potential for impacts on local road users.

In 2024, feasibility work was undertaken for the Proposed Development and was used to guide the early design and layout of the wind farm element of the Proposed Development. A 'preferred development envelope' was identified in the north of the Site in response to the following factors:

² Sullom Voe Development Framework (2025). Sullom Voe Development Framework. [online]. Available at: <https://sullomvoedevelopmentframework.co.uk/> [Accessed June 2026].

- ornithological sensitivity and constraint in the south of the Site;
- nationally important heritage assets on Hill of Crooksetter (chambered cairns), sight lines and intervisibility with heritage assets locally;
- residential receptors to the east of the Site at Brough and Toft;
- mitigating the effect on the character of the coast and hinterland and on key visual receptors such as tourists (including vantage points and recreational routes), settlements, road users and ferry passengers by focussing development to the north of the Site; and
- avoiding gaps in the proposed turbine array.

4.2 Alternative Layouts

Figure 4: Design Evolution summarises the design evolution of the wind turbine layout for the Proposed Development from layout 1 (Scoping Layout) to layout 4 (Design Freeze Layout).

The Proposed Development design process was iterative, with the design evolving as environmental constraints were identified and as feedback was received from consultees. The key design stages are detailed below.

4.2.1 Layout 1: Scoping Layout (10 turbines)

The Scoping Layout represented the layout that was developed based on an initial desk-based constraints review, taking account of the following:

- the outcome of the feasibility study which identified a 'preferred design envelope' in the northern section of the Site; and
- mapping of constraints including cultural heritage assets, watercourses and residential properties.

At this stage in the Site's design, it was considered that the Site could theoretically accommodate up to 10 turbines up to a 200 m maximum tip height.

4.2.2 Layout 2: Design Chill Layout (8 Turbines)

Following the Scoping stage, further environmental constraint information was gathered and led to the development of an amended layout, which was identified in response to the following:

- initial noise modelling of Layout 1 (Scoping Layout);
- community feedback following the initial public consultation period in March 2025;
- results of a peat probing survey; and
- the findings of the ornithology surveys and initial ecology surveys.

As a result of a review of the constraints outlined above, the following turbine movements were made:

- Turbine 1 was moved south west to avoid ornithology constraints including breeding locations, territories and key flight lines;
- Turbine 2 was moved south west into an area of shallower peat to maintain a 200 m buffer distance from an otter holt in the west, and to maintain spacing with Turbine 1 and Turbine 5;
- Turbine 3 was moved south west to avoid ornithology constraints including breeding locations, territories and key flight lines, and to avoid deep peat;

- Turbine 4 was moved south west to avoid a telecommunication link buffer zone; ornithology constraints including breeding locations, territories and key flight lines; and to be in shallower peat;
- Turbine 5 was moved south west to be in shallower peat and to maintain watercourse buffer zones;
- Turbine 6 was removed due multiple constraints including deep peat, proximity to watercourses and proximity to key ornithological territory centres;
- Turbine 7 was moved south west to be in shallower peat and to tuck the turbine into the turbine array;
- Turbine 8 was moved west to be in shallower peat and maintain distance from near-natural peat habitat;
- Turbine 9 was moved north west to be in shallower peat; and
- Turbine 10 was removed as a result of being located in deep peat, its proximity to watercourses, to reduce setting impacts between chambered cairns (Scheduled Monuments) and to reduce impact on breeding curlew.

Overall, two turbines were removed resulting in an eight turbine layout.

Based on the layout changes outlined above, the civil engineering team prepared internal site tracks and infrastructure. During this process, the layout was refined through micro-siting of turbines to optimise internal track and infrastructure alignment, whilst taking into consideration known environmental and engineering constraints, as well as maintaining turbine spacing to maximise wind resource potential. Locations within the Site for construction compounds, substations, BESS and borrow pits were also identified.

As part of the design development, alternative alignments for the main access track were considered. Routing the track closer to the turbine array was considered, however, the steepness of the topography in this area would have required extensive earthworks which were anticipated to result in a prominent scar on the landscape. To avoid this, a longer, but less steep main access track was selected. In addition, turbine hardstandings and site tracks were orientated to avoid near-natural peatland and to minimise earthworks where possible.

At this stage, the application boundary for the Proposed Development was adjusted to more accurately reflect the revised layout and extent of the infrastructure.

4.2.3 Layout 3: Gate Check Layout (8 Turbines)

The Gate Check layout, as presented in the Energy Consents Unit (ECU) Gate Check Report, was shared with statutory consultees for feedback before finalising the design. Changes to the layout were made in response to the following:

- Results from an additional peat probing survey;
- Results of peatland habitat walkover survey; and
- Further consideration of peatland habitats, watercourse crossings and site topography.

In response to the constraints outlined above, the following turbine movements were made:

- Turbine 3 and its hardstanding were moved north west to minimise impacts on actively eroding peat;
- Turbine 4 hardstanding was moved south west and inverted to minimise impacts on actively eroding peat;

- Turbine 5 and its hardstanding were moved north to avoid a telecommunication link buffer zone and to minimise impacts on bog pool habitats;
- Turbine 7 hardstanding orientation was adjusted slightly to accommodate a change in access between Turbine 7 and Turbine 4;
- Turbine 8 and its hardstanding were moved south west to accommodate change to the Turbine 8 access, allowing the turbine and hardstanding to better align with the topography to minimise earthworks; and
- Turbine 9 and its hardstanding were moved north east and re-oriented to avoid near-natural peat habitat and watercourse buffers.

In addition, in response to the constraints outlined above, access track design amendments were made to minimise impacts on peat, watercourses and bog pools.

4.2.4 Layout 4: Design Freeze Layout (8 turbines)

Following additional feedback from statutory consultees, the following design amendments were made to minimise impacts on peatlands and to address engineering constraints:

- Turbine 3 was moved north west and its hardstanding reorientated to align with the main access track and minimise peat excavation;
- The access track arrangements at Turbine 1, Turbine 7 and Turbine 8 were rationalised to remove the triangle track arrangement and minimise peat disturbance;
- The Turbine 1 to Turbine 3 access track was realigned to accommodate changes to Turbine 3 position and hardstanding orientation;
- The Turbine 3 to Turbine 4 access track was realigned to accommodate changes to Turbine 3 position and hardstanding orientation; and
- The northern borrow pit and temporary access track was removed to minimise peat disturbance.

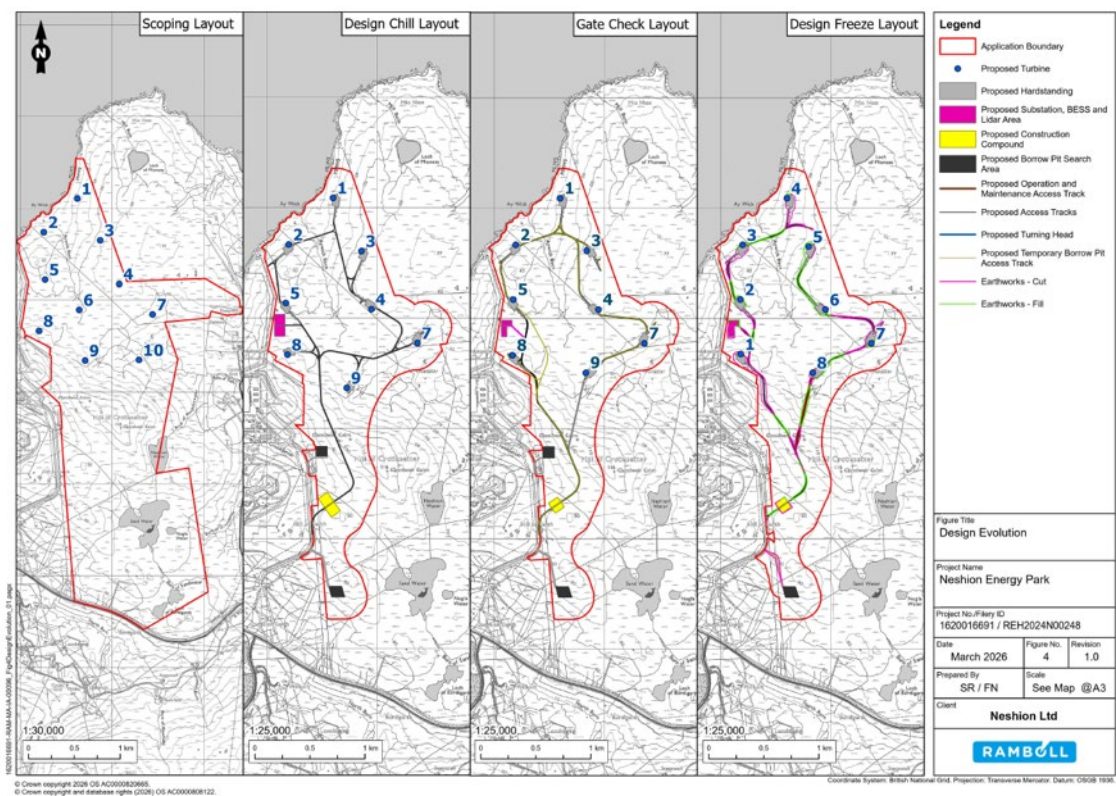


Figure 4: Design Evolution

5. Environmental Impact Assessment

5.1 Introduction

The EIA process is designed to identify the potential significant effects, both adverse and beneficial, that the Proposed Development could have on the environment and where it has been possible, set out how they have been reduced or mitigated. The EIA considered potential environmental impacts across a range of topics, in accordance with the Scoping Opinion received from the Energy Consents Unit (ECU).

The following environmental topics have been considered within the EIA:

- Seascape, Landscape and Visual;
- Cultural Heritage;
- Ecology;
- Ornithology;
- Hydrology, Hydrogeology, Geology and Soils;
- Traffic, Transport and Access;
- Noise;
- Aviation;
- Telecommunications; and
- Shadow Flicker.

The conclusions of the EIA are that potential likely significant effects were identified for a number of topics, however for the majority of these, with the application of mitigation, effects reduce to a non-significant level. The only exception to this is for certain effects within the topics seascape, landscape and visual and cultural heritage, where some significant residual effects would remain.

5.2 Seascape, Landscape and Visual Amenity

The EIA includes a Seascape, Landscape and Visual Impact Assessment (SLVIA) for the Proposed Development. It considers the likely significant effects arising during construction and operation on landscape fabric, landscape character, coastal character, designated and classified landscapes, and visual amenity, including effects on settlements, roads, ferry routes, core paths and representative viewpoints.

The assessment identifies that effects are concentrated primarily within the local host landscape and those areas with direct views towards the Site, particularly around Yell Sound and nearby settled areas. During construction, effects would generally be localised, temporary and largely reversible. During operation, the most notable effects would arise from the introduction of the proposed turbines as notable new features in views from parts of the surrounding area; however, many effects are moderated by distance, landform screening and the existing influence of development associated with SVT and other established infrastructure.

Significant effects are predicted for the host landscape character area and for selected nearby receptors where the Proposed Development would form a prominent new focus in views, while effects on many other receptors reduce to not significant with increasing distance or more limited visibility.

Overall, the chapter concludes that the Proposed Development would result in significant localised seascape, landscape and visual effects, but that these are contained within a defined area and have been reduced where possible through embedded design mitigation.

5.3 Cultural Heritage

The EIA includes an assessment of the archaeological and cultural heritage value of the Site and assesses the potential for significant effects on archaeological features and heritage assets resulting from the construction, operation and decommissioning of the Proposed Development. The assessment considers the potential for physical effects upon archaeological remains, as well as the potential for operational and cumulative setting effects upon designated heritage assets. Where appropriate and if necessary, measures to mitigate or offset such effects are identified, and an assessment of the significance of residual effects, following the implementation of any mitigation, is also made.

A review of baseline information and a walkover survey concluded that there is a High potential for previously unrecorded archaeological remains of the prehistoric period to be present within the Site. These are likely to be related to the existing prehistoric monuments within the Site and the agricultural use of the landscape during the post-medieval period. The Site also has a High potential for the recovery of deposits of palaeoenvironmental interest.

The Proposed Development has been designed where possible to avoid physical impacts on known heritage assets, although potential physical impacts have been identified to some recorded assets. To mitigate for physical impacts on unknown heritage assets, a programme of archaeological investigation would be undertaken to further investigate the potential for disturbance of hitherto unknown archaeological remains. The programme of works can be tailored in accordance with the archaeological potential of different areas of the Site and would be subject to consultation with SIC.

All designated heritage assets within 10 km of the Site were identified to assess the potential for the Proposed Development to impact their settings. An assessment of the settings of designated heritage assets was informed by consultation with HES, SIC, theoretical visibility analysis, site visits, and visualisations. Where appropriate and possible, turbines have been located to avoid identified key sightlines between monuments sensitive to changes in their settings.

The assessment identified a Moderate Level of Effect on the settings of three heritage assets as a result of the Proposed Development. This Level of Effect is considered Significant in EIA terms. Where EIA Significant effects have been identified as a result of the Proposed Development, it is necessary to consider the overall Level of Effect which would arise from the Proposed Development and identify whether the identified adverse impact would cause a significant adverse impact upon the integrity of the setting of the respective asset as per the NPF4³. In each case, the identified adverse impact is not considered to cause a significant adverse impact upon integrity of setting in terms of NPF4.

In addition, the assessment identified a Minor Level of Effect on the setting of eight assets, a Negligible or Neutral Level of Effect on 15 assets, and no impact on three assets: this Level of Effect is considered to be Not Significant in EIA terms.

³ Scottish Government (2023). National Planning Framework 4, Policy 7h, 46. Available at: <https://www.gov.scot/publications/national-planning-framework-4/> [Accessed 02/03/2026].

There is no change to the heritage impacts as a result of cumulative effects from operational or proposed wind farm schemes.

5.4 Ecology

The EIA includes an assessment of the likely effects of the Proposed Development on ecological receptors at the Site and surrounding Study Area, during construction and operation. This assessment is based upon comprehensive baseline data, comprising specifically of targeted ecological field surveys of important and legally protected ecological receptors identified during desk study and consultation feedback. It draws upon pre-existing information, where appropriate, from other studies, survey data sources and NatureScot and best practice guidance.

Targeted baseline ecology surveys, following best practice guidance, were undertaken within the Site and surrounding Study Area between 2022 and 2025.

There are seven statutory designated sites with ecological features within 10 km of the Proposed Development. The closest and most relevant to the site was the Yell Sound Coast Special Area of Conservation and Site of Special Scientific Interest.

The Study Area was characterised by blanket bog and dry modified bog. Less frequently recorded habitats including dry heath, wet heath, acid grassland, coastal grassland and marshy grassland.

There were otter and mountain hare signs recorded within the Study Area. These included an otter holt location, couch locations, spraints and feeding signs which were largely along the section of coastline.

Potential direct and indirect impacts were assessed following best practice guidance and were considered both during construction and during operation. Impacts on potentially sensitive ecological receptors were avoided and minimised wherever possible in line with NPF4 and best practice guidance and were incorporated into the design process (embedded mitigation).

This assessment does not predict any likely significant ecological residual effects associated with the construction and operation of the Proposed Development.

Extensive opportunities for ecological restoration and enhancement have been identified in the Outline Biodiversity Enhancement Habitat Management Plan in accordance with NPF4 including proposed measures such as peatland restoration, reducing grazing pressure, creating and strengthening nature networks, creation of artificial otter holts, removal of waste along the coastline, creation of wader scrapes and offsite biodiversity enhancement and habitat management.

5.5 Ornithology

The EIA includes an assessment of the likely effects of the Proposed Development on ornithological receptors at the Site and surrounding Study Area, during construction and operation. This assessment is based upon comprehensive baseline data, comprising specifically of targeted ornithological field surveys of important and specially protected ornithological receptors identified during desk study. It draws upon pre-existing information, where appropriate, from other studies, survey data sources and NatureScot and best practice guidance.

Targeted baseline ornithological surveys, following best practice guidance, were undertaken within the Site and surrounding Study Area between 2022 and 2024. The desk study and targeted field surveys, identified the following important ornithological receptors potentially affected by the Proposed Development: namely designated sites (and their qualifying species), and fifteen wider countryside species: red-throated diver, golden plover, ringed plover, dunlin, lapwing, redshank, whimbrel, curlew, merlin, great black-backed gull, common gull, herring gull, Arctic tern, Arctic skua and great skua.

Potential direct and indirect impacts were assessed following best practice guidance and were considered both during construction and during operation. Impacts on potentially sensitive ornithological receptors were avoided and minimised wherever possible in line with NPF4 and best practice guidance and were incorporated into the design process (embedded mitigation).

This assessment does not predict any likely significant ornithological residual effects associated with the construction and operation of the Proposed Development.

Extensive opportunities for habitat restoration and enhancement described in the Outline Biodiversity Enhancement and Habitat Management Plan in accordance with NPF4 are considered likely to benefit blanket bog specialists, specifically breeding red-throated divers and waders.

5.6 Hydrology, Hydrogeology, Geology and Soils

The EIA includes an assessment of the likely significant effects on hydrological, hydrogeological, geological and soil receptors related to the Proposed Development. Primary objectives include establishing the baseline environmental conditions, establishing assessment methodologies, and determining the significance of potential impacts in the context of key legislation and guidelines for the protection of the water and geological environment in Scotland.

Receptors of focus within the water environment include watercourses, water supplies including private and public water supplies, lochs and groundwater. Main receptors for geology and soils are primarily focussed on peat and carbon rich soils.

Potential impacts during construction are associated with temporary alterations to surface water flow pathways, increased sedimentation and erosion, potential for effects on carbon rich soils and deep peat, including peat landslide effects, and the risk of accidental pollution arising from earthworks, material storage, and construction activities. During operation, potential effects are limited to minor changes in surface runoff characteristics and localised erosion associated with hardstanding areas and site drainage infrastructure.

Baseline conditions identify the presence of onsite surface water features including the Aywick Burn, Burn of Toft, and ephemeral streams, and provides context of surrounding controlled waters and receptors including designated sites.

Peat surveys were carried out at the Site including peat depth probing and coring. The peat depth survey results indicate the Site to be predominately underlain by areas of deep peat. For this reason, it has not been possible to avoid areas of deep peat (defined as soil with peat deeper than 1 m) in the siting of the Proposed Development.

The peatland at the Site was found to be predominantly modified or actively eroding with evidence of drainage, grazing, peat erosion, and peat cuttings. Smaller areas of near natural peatland were identified which have been avoided.

The chapter outlines mitigation measures to ensure reduced disruption to existing hydrological systems, including a CEMP, Sustainable Drainage Systems (SuDS), pollution prevention protocols, which would be developed in a manner consistent with the scope and content of the CEMP. The report also outlines mitigation measures to reduce the potential effects on peat and carbon.

Potential cumulative effects from other operational and consented wind farms and energy infrastructure developments in the surrounding area were also considered. Due to the limited hydrological connectivity between sites and the implementation of consistent good practice and embedded mitigation, no significant cumulative impacts on hydrology or hydrogeology are anticipated.

Overall, with the proposed embedded, standard and additional mitigation measures, the Proposed Development would not result in significant adverse effects on hydrology, hydrogeology, geology and peat resources.

5.7 Traffic and Transport

The EIA includes an assessment of the potential traffic and transport effects of the construction of the Proposed Development. The assessment has been conducted with reference to relevant legislation and planning policy, and the methodology and significance criteria used to assess the effects of the Proposed Development are industry standards. This includes an assessment of the likely significant environmental effects associated with increased traffic generated by the Proposed Development.

During the operational phase of the Proposed Development, only a small number of vehicles would attend the Proposed Development on an infrequent basis to undertake inspections or maintenance activities. As such, no likely significant operational effects are anticipated, and no detailed assessment of such effects has been undertaken.

Traffic effects during the decommissioning phase of the Proposed Development are assumed to be less than during the construction phase and no detailed assessment of decommissioning effects has been undertaken.

To determine appropriate access routes to the Site, detailed consideration and assessment of the surrounding road network was undertaken in the form of a comprehensive desk-based study. This established that the most likely route for general construction traffic travelling to the Site is from Lerwick Harbour along the A970, then the A968 to Firth, the B9076, and finally the private road to the Shetland Gas Plant and Site entrance.

It is expected that the turbine components would land at Lerwick, however the Port of Sullom Voe is being considered as an alternative.

The construction period is expected to last approximately 24 months. The main source of construction HGV traffic would be the import of stone and concrete for access tracks, hardstanding areas and turbine bases.

The assessment finds no significant effects as a result of the temporary increase in traffic associated with construction of the Proposed Development.

A Construction Traffic Management Plan (CTMP) would be produced and agreed for with SIC and Police Scotland to manage construction traffic and minimise impacts on existing road users and residents along the access routes.

5.8 Noise

The EIA includes a noise assessment to determine the likely significant noise effects from the operational and construction phases of the Proposed Development, at nearby noise sensitive receptors.

Baseline noise monitoring was undertaken at five locations proximate to the Proposed Development. The baseline noise data was used to define appropriate construction noise thresholds and inform the operational noise assessment.

Construction noise activities associated with the Proposed Development were assessed in accordance with guidance. The results show that the predicted noise levels would be below the most stringent of the noise threshold levels. Nevertheless, good practice noise control measures during construction are recommended to keep noise to a minimum and recommendations in accordance with best practice guidance have been made in this chapter.

The operational wind farm noise assessment, in accordance with good practice guidance, predicted that cumulative operational wind farm levels for noise would be to an acceptable level. Predicted operational noise levels from the Proposed Development on its own indicate that it would also be to an acceptable level. Therefore, no significant effects result from the operational phase of the wind farm.

5.9 Aviation

The EIA includes an assessment of the likely significant effects on aviation and radar associated with the construction and operation of the Proposed Development. It finds that the Proposed Development has the potential to affect the Ministry of Defence (MoD) Saxa Vord air defence radar, the Brough Hill Vessel Traffic Service (VTS) radar and low flying military aircraft.

The Applicant proposes to mitigate the effects of the Proposed Development on the Saxa Vord air defence radar by the application of a Non-Auto Initiation Zone (NAIZ) (a radar mitigation technique used primarily to reduce interference from wind turbines on air-defence or air-traffic surveillance radars) over the wind farm. This mitigation has been accepted by the MoD and is in operational use at numerous onshore wind farm sites across the UK. The residual effect of the Proposed Development on the Saxa Vord radar would not be significant.

The Applicant proposes to mitigate the effects of the Proposed Development on the Brough Hill VTS radar by the reconfiguration of the Sullom Voe radar network to be applied by the radar operator. The residual effect of the Proposed Development on the Brough Hill radar would not be significant.

The MoD has advised that the effects of the Proposed Development on low flying military aircraft would be acceptably mitigated by the imposition of planning conditions requiring pre-construction notification of the details of the Proposed Development and the provision of aviation lighting. These measures are required by law and would, if required, be additionally secured through planning conditions. The residual effects of the Proposed Development on military low flying would not be significant.

5.10 Telecommunications

The EIA includes an assessment of the likely significant effects on telecommunications associated with the construction and operation of the Proposed Development. The assessment finds that there are three microwave and one scanning telemetry links with the potential to be affected by the Proposed Development.

The turbine layout of the Proposed Development has been designed to ensure that all blade tips would remain at least 100 m clear of all fixed microwave links in the vicinity. The effects of the Proposed Development on fixed microwave telecommunications links are therefore assessed as not significant.

Following further engineering analysis by the Joint Radio Company (JRC), funded by the Applicant, a mitigation solution for the effects of the Proposed Development on the scanning telemetry link from the Shetland Gas Plant Substation to the Firth Substation has been identified and approved by the link operator, Scottish & Southern Energy (SSE).

Following implementation of agreed mitigation, the Proposed Development would have no significant effects on telecommunications.

5.11 Shadow Flicker

The EIA includes an assessment of the potential impacts on residential amenity resulting from shadow flicker from the Proposed Development. A study area around each turbine was considered and 11 receptors potentially susceptible to shadow flicker were identified within the study area.

There are no published guidelines in Scotland that define acceptable levels of shadow flicker. In the absence of specific guidelines, the assessment has considered the UK Government guidance which considered guidelines from different countries relating to shadow flicker.

This assessment has used criteria based on Northern Irish and German guidance. As such, properties where shadow flicker would potentially exceed thresholds would be subject to significant effects, in the absence of mitigation.

The assessment indicates that the potential number of shadow flicker hours experienced exceeds thresholds at five of the properties identified within the study area. In the absence of mitigation, shadow flicker effects are potentially significant for these receptors.

This analysis provides an extremely conservative estimate of the extent that the properties would be affected by shadow flicker. Due to frequent cloud cover, low irradiance intensity, turbines not turning at all times, the presence of intervening vegetation and turbine rotors not being aligned with the sun in a way to cast maximum shadow onto the proposed properties all of the time, the number of hours when shadow flicker would affect the aforementioned properties is anticipated to be far fewer.

Mitigation in the form of a wind farm shadow flicker protocol has been proposed by the Applicant to avoid significant shadow flicker effects. With appropriate mitigation measures in place the impact from shadow flicker is predicted to be non-significant for the Proposed Development.

5.12 Summary

As a result of a combination of design-led mitigation and additional construction mitigation measures, the EIAR concludes that the likely significant effects associated with the Proposed Development, alone and in addition to other wind farm developments, are limited to seascape, landscape and visual effects (in localised areas) during construction and operation of the Proposed Development and setting effects on three heritage assets during the operation of the Proposed Development.

With the implementation of mitigation measures, no significant effects are identified on ecology, ornithology, hydrology, hydrogeology, geology and soils, traffic and transport, noise, aviation, telecommunications and shadow flicker.