



# Non-Technical Summary

Monan Repower

**Client:** Constantine Wind Energy (UK) Ltd

**Reference:** C5507-442

Version 2.0

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## Non-Technical Summary

Constantine Wind Energy (UK) Ltd | C5507-442 | Version 2.0



### Report Prepared for:

Constantine Wind Energy (UK) Ltd

### Author:

Green Cat Renewables Ltd

<b>Checked by</b>	Isla Ferguson	Date	11/03/2024
<b>Approved by</b>	Rob Collin	Date	15/03/2024

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# 1 Introduction and Background

## 1.1 Project Background

This document provides a Non-Technical Summary (NTS) of the Environmental Impact Assessment (EIA) Report for the proposed Monan Repower (the Proposed Development). The EIA Report forms part of an application by Constantine Wind Energy (UK) Ltd, hereafter referred to as 'the Applicant' for consent to construct, operate and decommission the Proposed Development. The application will be submitted under the Town and Country Planning (Scotland) Act 1997 (As Amended). The Environmental Impact Assessment (EIA) Report has been prepared in support of the application to Comhairle Nan Eilean Siar (CnES).

The Proposed Development comprises three wind turbines up to 86 metres (m) in height from the ground to blade tip, and associated infrastructure. Each wind turbine would generate around 500kW of electricity for an overall total of 1.5MW of generating capacity.

The Proposed Development is located solely within CnES. The new turbines would be located in close proximity to the current turbine positions and will use the majority of the existing access tracks. The wider area is sparsely populated with the nearest residential properties situated 1.0km to the south-west in Bunavoneader. The settlement of Tarbert is 4.6km south of the Site.

## 1.2 Environmental Impact Assessment Report

An EIA Report is a means of drawing together, in a systematic way, an assessment of the likely significant environmental effects arising from a proposed development. It is a rigorous assessment of the potential environmental effects the development may have across a wide range of areas. The purpose of the assessment is to ensure that decision makers consider these environmental impacts when forming a decision on the planning application.

The EIA Report is a report that pulls together the results of the assessments as part of the EIA. The EIA Report includes a description of how the work was carried out and any assumptions that were used. It sets out the likely impacts of the development on the environment and describes the measures proposed to reduce any impacts (known as 'mitigation').

In line with the EIA Directive and the local planning policies, the EIA Report covers the key environmental, technical and social issues associated with the Proposed Development.

The EIAR comprises the following chapters:

1. Introduction
2. Proposed Development
3. EIA Methodology
4. Planning and Regulatory Policy
5. Carbon Balance
6. Landscape and Visual Impact Assessment (LVIA)
7. Hydrology
8. Ecology
9. Ornithology
10. Telecommunications and Infrastructure

11. Traffic and Transport

12. Other Issues (Aviation and Radar, Decommissioning of the Existing Scheme and Safety)

13. Summary of Mitigation

### 1.3 Structure and Content of Planning Application

The application is comprised of the following documents:

- EIAR containing all chapters outlined in Section 1.2 above.
- Non-Technical Summary summarising the key findings of the technical assessments in a non-technical style for ease of understanding.
- A Planning Statement outlining key planning policy.
- Supporting Figures and Drawings include all of the technical planning application drawings and any supporting figures utilised in the topic chapters.

All appendices are attached to the appropriate topic chapter in the EIAR.

Figures extracted from the planning application drawings have been inserted in the relevant EIAR sections where appropriate.

## 2 Proposed Development and Design Evolution

### 2.1 Site Selection

The overall site selection and subsequent design process involved two main phases:

- A consideration of the overall design objectives.
- The iterative site selection phase which looked at site-specific constraints and opportunities.

This Site offers an opportunity to repower the existing wind farm. The existing Monan Wind Farm provides wind speed data, and an established wind farm at that location which provides a good understanding of ground conditions and significant constraints on-site, existing infrastructure such as grid connections and an established presence in the landscape.

The site selection also needs to take into account planning policy, wind speed, whether the site can be accessed easily and any environmental issues such as protected birds or protected areas.

### 2.2 Site Constraints

The next step in the design process is to identify all environmental issues and potential constraints on-site and work out whether the wind farm is technically feasible. The best way to view and appreciate these issues is to lay them out on a plan of the area (Figure 2.1).

Constraints were identified through desk-based assessment, site surveys and the consultation process. Key constraints for the Site include:

- Landscape Designations- Harris-Uig Hills WLA and South Lewis, Harris and North Uist NSA;
- Class 1 and 2 Peat;
- Hydrological features; and
- Topographical features.

There are a number of features surrounding the Site that require appropriate separation distance requirements, namely:

- The Application Boundary;
- Water features on and in close proximity to the Site;
- Infrastructure in close proximity to the Site; and
- Residential properties in close proximity to the Site.

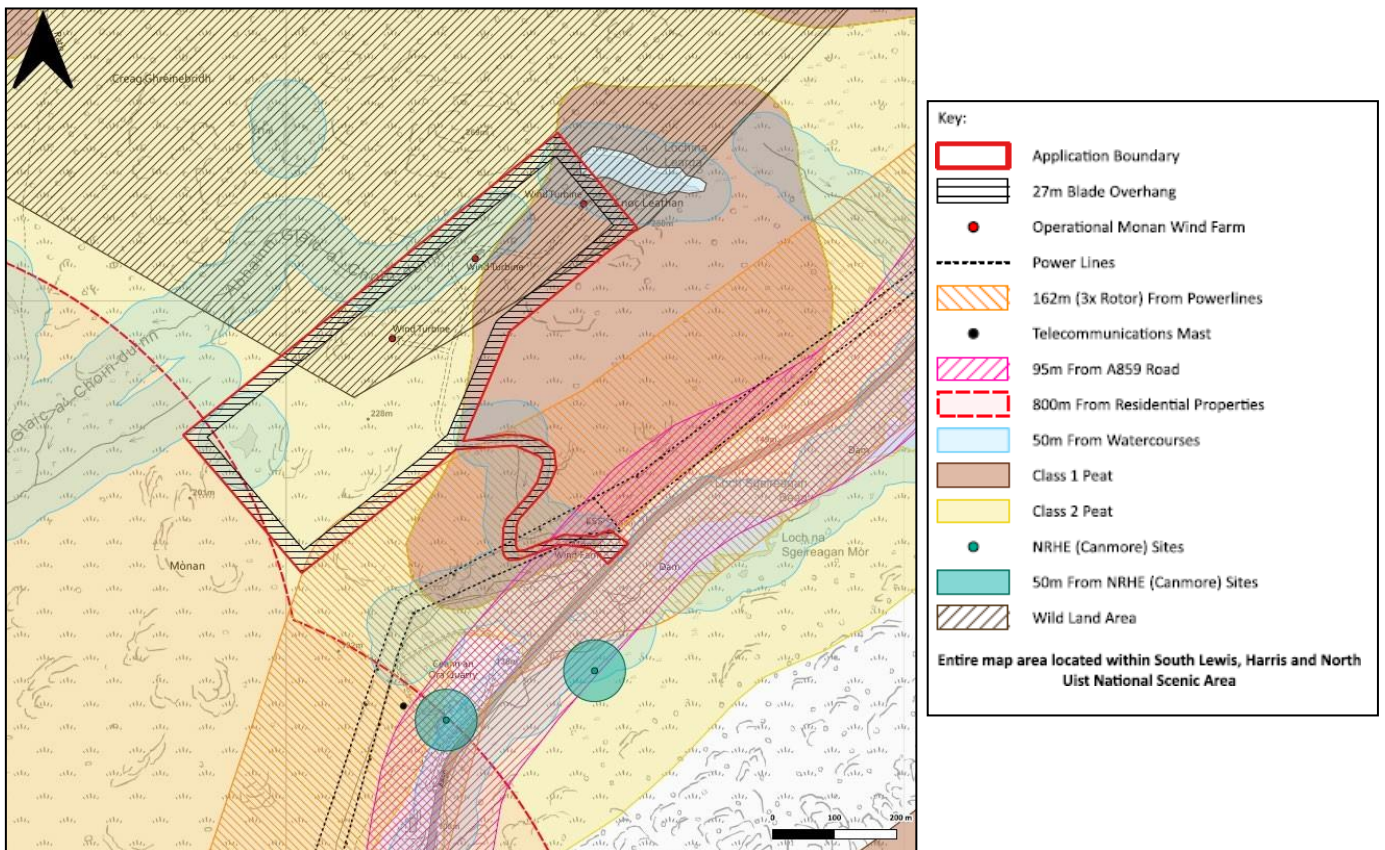


Figure 2.1 - Site Constraints Plan

## 2.3 Site Design

The design process of the Proposed Development has had three key iterations. These iterations have taken into consideration environmental constraints, results from environmental baseline surveys, scoping responses from consultees and knowledge from the operational wind farm.

The goal of the final layout of the turbines and associated infrastructure is to have the least impact on environmental features and neighbours and avoid any significant impacts. At the same time, the technical and commercial viability of the overall project has to be considered. For more information on design iterations please see Chapter 2 - Proposed Development and Design Evolution.

## 2.4 The Site

The A859 lies approximately 400m south-east of the Site and is a key route within the immediate area, running from Stornoway to Rode. The Site features prominent hills and has an undulating terrain with peaks ranging from 221m AOD and 228m AOD. The Abhainn Glaic a' Choin duinn partially runs through the northern section of the Site. The western edge of Loch Learga is situated within the Application Boundary.

## 2.5 Development Description

The Proposed Development consists of the following infrastructure elements:

- Three, three-bladed horizontal axis wind turbines measuring up to 86m tip height and up to 500kW each;

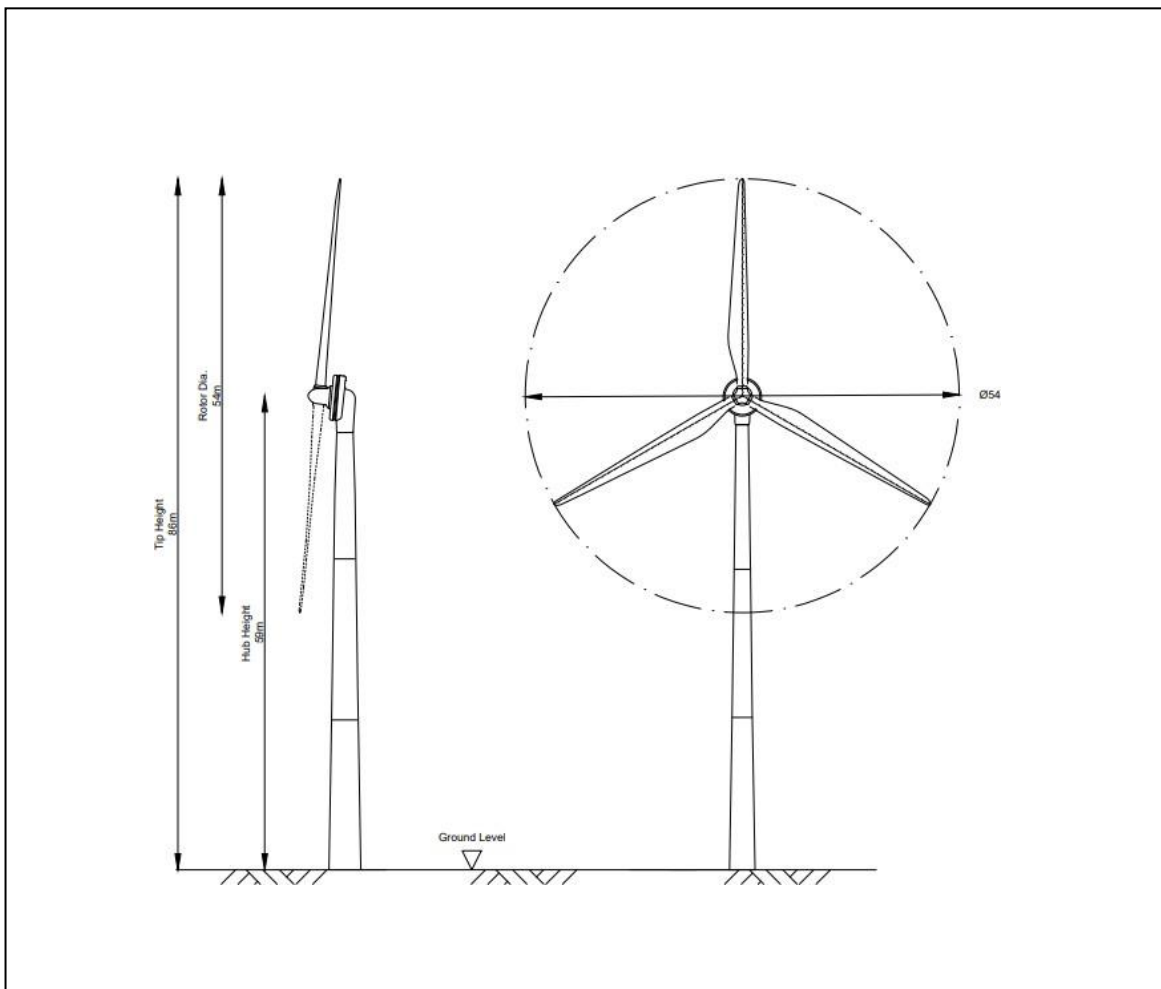


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- Hardstanding areas for cranes at each turbine location;
- Turbine foundations;
- Drainage works;
- A temporary construction compound, including parking, and welfare facilities;
- Associated ancillary works; and
- 370m of new access track and 930m of upgraded access track.

The candidate wind turbine used for the purposes of the assessments is the EWT DW54X model which has a tip height of 86m, a rotor diameter of 54 metres and a hub height of 59m. The dimensions of the turbine are shown in Figure 2.2 below.



**Figure 2.2 - Proposed Turbine Elevation**

Existing access tracks and turning/passing areas on the Site will be upgraded and utilised as far as possible. A short section of new access track will be required to access T1. Approximately 370m of new access tracks would be required for the Site. This can be seen in drawing C5507-GCR-WF-GA-DR-P-0002 Site Layout.

Further details about the specifications of all the infrastructure can be found in Chapter 2: Proposed Development and Design Evolution.

## 2.6 Decommissioning

At the end of their operational life it is assumed that the Proposed Development would be decommissioned. The decommissioning will be undertaken in accordance with good practice guidance available at the time. While details of the decommissioning stage for this development are not known at this time, it is assumed for the purpose of the EIA that decommissioning will involve the removal of all above ground infrastructure. On completion of the decommissioning works, all temporary facilities will be removed and areas of excavation disturbed will be reinstated.

It is proposed that a decommissioning, or indeed further repowering plan will be agreed with CnES and relevant consultees prior to the end of life of the Proposed Development in line with planning conditions.

## 3 EIA Methodology

The Monan Repower EIA has been carried out in accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (hereafter referred to as the EIA Regulations).

The approach to the EIA also follows the requirements of guidance including:

- Institute of Environmental Management and Assessment (IEMA) Environmental Impact Assessment Guide to Shaping Quality Development (IEMA, 2015).
- Environmental Impact Assessment Handbook; guidance for competent authorities, consultation bodies and other involved in the Environmental Impact Assessment process for Scotland (NatureScot and Historic Environment Scotland, 2018);
- Relevant guidance issued by other government and non-governmental organisations; and
- Receptor-specific guidance documents. Where specific guidance has been used it has been identified in the Legislation, Policy and Guidance section of each technical chapter within the EIA Report (EIAR).

EIA is a statutory process governed by UK and European law. It is a means of drawing together in a systematic way, an assessment of the likely significant environmental effects arising from a proposed development. In Scotland, the relevant regulations are provided in The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. This section presents an overview of the methodology to be utilised for the production of the EIAR. It outlines the methodology for the identification and evaluation of likely significant environmental effects, both for the Proposed Development itself and cumulatively with other developments.

## 4 Regulatory Policy and Context

Chapter 4 of the Environmental Impact Assessment (EIA) Report presents a review of the local and national policy context and legislative framework underpinning the Proposed Development. The EIA Report has been produced to detail the potentially significant environmental impacts identified during the EIA process under EIA Regulations. Further legislation and policies specific to each EIA topic are outlined in the relevant technical chapters of the EIA Report.

The international, national and local policies and legislative frameworks that underpin the Proposed Development include:

- International Context
  - United Nations Framework Convention on Climate Change.
- Wider UK Context
  - Climate Change Act 2008;
  - The Energy Act 2023;
  - Energy White Paper: Powering Our Net Zero Future;
  - Net Zero Strategy: Build Back Greener;
  - British Energy Security Strategy; and
  - Powering-Up Britain: Energy Security Plan.
- National Context
  - The Climate Change (Scotland) Act 2009;
  - The Climate Change (Emissions Reductions Targets) (Scotland) Act 2019;
  - National Planning Framework 4 (NPF4);
  - The Electricity Generation Policy Statement 2013;
  - Scotland's Energy Strategy;
  - Draft Energy Strategy and Just Transition Plan – Delivering a fair and secure zero carbon energy system for Scotland 2023;
  - Town and Country Planning (Scotland) Act 1997; and
  - Onshore Wind Policy Statement 2022.
- Local Context
  - Outer Hebrides Local Development Plan 2018; and
  - Outer Hebrides Local Development Plan: Supplementary Guidance for Wind Energy Development.

# 5 Carbon Balance

## 5.1 Introduction

Carbon balance considers the potential impact the Proposed Development has on climate change through a carbon balance assessment.

The UK and Scottish Governments have developed ambitious targets for tackling climate change:

- The UK Government, in the 2008 Climate Change Act made a commitment to reduce the UK's emissions of CO<sub>2</sub> by 34% (on 1990 levels) by 2020 and 80% by 2050.
- The Climate Change (Scotland) Act 2009 set in statute the Government's Economic Strategy target to reduce Scotland's emissions of greenhouse gases by 80% by 2050 (on 1990 levels), with an interim reduction target of at least 42%.
- Scotland has set a target of becoming net zero by 2045. With a new legally binding target for 2030 of a 75% reduction in emissions compared to 1990<sup>1</sup>.
- The UK Government amended the Climate Change Act of 80% reduction to 100% reduction by 2050. These targets will be achieved through an investment in energy efficiency and clean technologies such as renewable energy generation.

The Onshore Wind Policy Statement<sup>2</sup> was published in December 2022 and sets out the Scottish target to deploy 20GW of onshore wind by 2030. The Scottish Government wants to accelerate the transition to renewable energy and a net zero society to combat climate change.

Comhairle Nan Eilean Siar are working to become Net Zero in line with the Scottish Government targets (Net Zero by 2045). CnES released a Carbon Management Plan 2017/2023 which sets out their ambitions for carbon management and a roadmap for progress. The council set a target by 2023 the introduction of carbon saving projects Comhairle nan Eilean Siar will have reduced its carbon emissions by 9.87% on a baseline of 2016. This equates to a figure of 15,499 tonnes CO<sub>2</sub> in 2023.

The manufacturing, construction, and installation of the wind turbines on site has an associated carbon cost, and carbon losses are also generated by the requirement for extra capacity to back up wind power generation.

## 5.2 Summary of Results

The assessment demonstrates that the Proposed Development would make a positive contribution to the ambitious targets set out in the Climate Change (Scotland) Act 2009 and CnES's Carbon Management Plan 2017/2023, meanwhile contributing to the wider national target of achieving net zero by 2045.

Predicted overall carbon savings/losses, shows that over its 35-year lifetime the project is expected to result in a CO<sub>2</sub> saving of ~200,500 tonnes. It's anticipated that the carbon expended in creating the Proposed Development will be offset in approximately two years (equivalent to 6% of its 35-year operational lifespan). The Proposed Development is expected to have a beneficial effect on climate change in terms of offsetting greenhouse gas emissions.

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<sup>1</sup> <https://www.legislation.gov.uk/asp/2019/15/section/1/enacted> (Accessed December 2023)

<sup>2</sup> <https://www.gov.scot/publications/onshore-wind-policy-statement-2022/> (Accessed December 2023)

# 6 Landscape and Visual Impact Assessment

## 6.1 Introduction

Landscape and visual is concerned with the impact the Proposed Development will have on the landscape resource and character of the North Harris area of CnES and the visual impact it will have on residents, tourists, recreational users of the landscape, road users and anyone else visiting the area. A Landscape and Visual Impact Assessment (LVIA), including a Cumulative LVIA, was undertaken for the Proposed Development in accordance with EIA regulations and best practice. The landscape and visual assessment is supported by a series of graphics and visualisations.

## 6.2 Assessment Results

### 6.2.1 Landscape Assessment

The Proposed Development is located within the Dramatic Mountain Massif LCA of the Prominent Hills and Mountains LCT, within the Comhairle nan Eilean Siar Character Assessment and would affect a proportion of that part of that LCA. It is part of a landscape which has previously been altered with the existing turbines, although when combined with its scale, form and value as part of a National Scenic Area, gives it a high landscape sensitivity. The assessment found no unacceptable effects on the LCA. This was due the scale of the landscape unit, the presence of existing turbines on the Site, and the limited influence the Proposed Development would have across the LCA. It should be noted that although prominent from within the brief sections of the landscape, the addition of the Proposed Development would not alter the perception of the LCA given these are brief and affect a section which currently has wind turbines on it.

Considering the wider area, the assessment has concluded that there would be no significant indirect effects on any of the other landscapes. From all of the other LCAs within the study area, impacts were found to be generally of a low to negligible level. The assessment shows that the visual influence over the wider area is incredibly limited, with most visibility occurring immediately around the Site. Beyond this, views become increasingly limited and sparser, particularly to the north and east.

### 6.2.2 Effects of Designated Landscapes

The landscape of the Site area is designated as both a National Scenic Area (NSA) and a Wild Land Area (WLA), as such there will be some minor direct effects on these landscape designations. However, given the position of the Proposed Development on a site of existing turbines, this will be highly limited and not result in the loss of any features key to either of these designations. The Proposed Development will not cause any significant impacts on any of the special qualities which comprise the NSA, nor on the key attributes of the WLA. The ZTV indicates limited visibility across these designations which will help to keep their character and qualities intact.

### 6.2.3 Visual Assessment

#### 6.2.3.1 Visual Effects: Construction Period

There will be no significant visual effects resulting from the construction period and visibility of the ground-based activity. Views of concentrated areas of construction could however lead to a temporary and negative effect that in some cases may appear more disruptive than the finished Proposed Development. Post construction, the appearance of the Site would recover a calmer visual character with negligible levels of activity visible on Site from the nearest visual receptors.

### 6.2.3.2 *Visual Effects: Operational Period*

Four locations across the study area were photographed and photomontages created to illustrate how the Proposed Development would typically appear, these locations were agreed with the Council prior to undertaking. In addition to this a further two wireline visualisations were also included in the suite of figures. The viewpoint analysis focused on those areas most likely to be affected by the larger turbines. While the Proposed Development turbines are notable features, they are not prominent and would never be dominant nor overbearing features and affect views already containing existing turbines.

There would be moderate visual effects from a short section of the A859 to the east of the Proposed Development. While significant views are experienced from this area, the effects are brief and the turbine still not prominent and in keeping with the scale of the landscape. Nor would they block the important vistas over Loch a Siar, Frith Losgaintir and Taransay. The visual effects of the Proposed Development are never deemed unacceptable for any locations.

### 6.2.4 *Cumulative Landscape and Visual Effects*

The cumulative effects are highly limited given that the only other developments with the study area are the existing Monan turbines which the Proposed Development will replace and the Uisenis wind farm which is currently in planning. Uisenis is around 16km distance and simultaneous visibility of the two will be extremely rare.

## 6.3 *Summary*

The Proposed Development will replace three existing 2-bladed wind turbines of 46m to tip at Monan Wind Farm, with three 3-bladed wind turbines with a tip height of up to 86m. The advantages of this are the ability to impact a section of the landscape, both directly and indirectly, that is already affected by this type of development, albeit with a larger scheme.

The Proposed Development is located in the Dramatic Mountain Massif landscape of northern Harris, on the same section of landscape where the existing Monan turbines are situated. The Site offers the opportunity for the proposed turbines to be located within a landscape which has already been altered by the existing turbines, reducing the need to open up new areas of landscape to locate the turbines in. While there would be some locally significant effects on the Dramatic Mountain Massif landscape, this would not be sufficient to alter the current perception of that landscape and the mountains remain dramatic and the focal point and primary aspect of the area.

While located within both a National Scenic Area and a Wild Land Area, the Proposed Development would not be sufficient to alter the qualities and attributes which comprises these designations. This is in part due to the limited scale of the proposal and the lack of a wider visual influence across the area. The turbines are only notable from a few locations immediately around the Site and are never prominent features. The containment offered by the topography limits longer range views and a wider influence over the landscape and visual receptors of Harris.

# 7 Hydrology

## 7.1 Introduction

Understanding surface and groundwater environments is critically important to designing a successful project. Surface water includes watercourses, water bodies, and precipitation runoff. It provides an important resource for: potable and other uses, amenity, aesthetic value, conservation, ecological environments, and for recharge to groundwater systems. Groundwater is also an important resource. It provides more than a third of the potable water supply in the UK and includes all water stored in permeable underground strata (or aquifers). In addition, it provides essential baseflow to rivers and wetland areas, often supporting important ecological systems.

The risk of pollution or disruption of watercourses, groundwater bodies, and private water sources, within or near the Site, needs to be assessed and appropriately mitigated where necessary. Potential impacts could include:

- Erosion and sedimentation
- Impacts to surface runoff characteristics
- Impacts on surface water quality
- Impacts on river flows and flooding
- Impacts on groundwater dependent terrestrial ecosystems (GWDTE)
- Impacts on soils
- Impacts on peat hydrological regime
- Chemical pollution of groundwater
- Disruption or fouling of private water supplies
- Impacts on public water supplies and abstractions
- Modifications to hydrogeological regime
- Peat Slide Risk

## 7.2 Sensitive Receptors

The identification of sensitive receptors, considering baseline conditions, is summarised below.

**Table 7.1 - Sensitive Receptors**

Receptor	Comment
Watercourses & Fisheries	The Abhainn Eadarra, Loch a Siar, and their tributaries form part of the Lewis and Harris Coastal catchment.  Although the tributaries to these watercourses are also considered, for ease of reference these are referred to collectively as the Abhainn Eadarra and Loch a Siar respectively in the remainder of this assessment
Groundwater Unit	The Proposed Development is situated on the Lewis and Harris groundwater unit, which SEPA has awarded an overall status of 'Good' in 2022. This is generally classed as a low productivity aquifer (2C).
Peatland	The study area is predominantly underlain with Class 1 and Class 2 peatland.
Designated Sites	The West Coast of the Outer Hebrides SPA is located c.1.1km downstream of the Proposed Development.



Receptor	Comment
GWDTE	The MG10a, M15a, and M15c communities within the study area are considered to be Class 2 GWDTE

## 7.3 Potential Impacts

### 7.3.1 Watercourse and Fisheries

The topography on Site dictates that surface water runoff will be directed towards the Loch a Siar via its tributaries. However, this potential impact is limited to the construction of the new access track.

Due to the topography and proximity, there is potential for increased surface runoff to enable sediment and contaminants to reach the nearby watercourses. However, this is limited by the nature of the works and the existing drainage system associated with the existing access tracks.

There is potential for contaminated runoff to reach nearby watercourses. However, this is limited by the nature of the works and the existing drainage system associated with the existing access tracks.

Due to their proximity, the construction of the new access tracks and crane hardstandings has the potential to interrupt surface water and groundwater flow paths to the waterbodies.

Due to the proximity, the watercourses within the study area have the potential to be impacted by any temporary dewatering activities.

### 7.3.2 Groundwater Unit

The extent of the impermeable surfaces proposed is limited in relation to the size of the catchment area.

Sedimentation from construction activities could result in silt-laden runoff entering the groundwater, if unmitigated. However, the potential impact is also tempered by the relatively large size of the groundwater body.

There is potential for chemical pollution given the nature of the development; however, the impact is tempered by the relatively large size of the groundwater body.

There is limited opportunity for the Proposed Development to interrupt groundwater flow paths, which is further tempered by the relatively large size of the groundwater body.

There is limited potential for dewatering activities to significantly impact the groundwater table, particularly given the size of the groundwater body, and any dewatering activities being temporary.

### 7.3.3 Peat

Due to the proximity, there is potential for any unmitigated runoff to degrade the surrounding Class 1 and Class 2 peatland. However, this is restricted by the limited increase in the impermeable footprint.

Due to the proximity, there is potential for the Class 1 and Class 2 peatland to be impacted by any sedimentation of erosion from the Proposed Development. However, this is limited by the nature of the works.

Chemical pollution may lead to the loss of peatland vegetation cover, which would leave the underlying peat vulnerable to erosion.

Due to their proximity, the construction of the new access track, crane hardstandings, and turbine foundations may interrupt groundwater flow to the Class 1 and Class 2 peat.

Due to the proximity, dewatering has the potential to temporarily dry the peat mass in the vicinity of the works.

### 7.3.4 Designated Sites

Due to the topography, there is potential for runoff, sediment-laden runoff and contaminated runoff to reach the designated site. However, this is tempered by the distance and the nature of the Proposed Development.

Due to the distance, it is unlikely that the construction of the Proposed Development will impact the flow paths to the designated site. It is anticipated that if any tributaries are impacted upstream, the water level will have recharged by the time the watercourse reaches the coastal designation.

It is not anticipated that any required dewatering works will affect the designated site as it is located c1.1km to the south-west of the Proposed Development.

### 7.3.5 GWDTE

The topography on Site dictates that surface water runoff will be directed over GWDTE communities.

Due to the proximity, these communities have the potential to be impacted if sediment-laden runoff is distributed over sensitive communities.

Due to the proximity, unmitigated chemical pollution has potential to degrade GWDTE in the vicinity of the construction works.

Due to their proximity, the construction of access track and hardstanding areas may interrupt groundwater flow to the GWDTE communities.

Dewatering may temporarily affect groundwater in the vicinity of these communities.

## 7.4 Mitigation

Prior to construction, an Environmental Management Plan (CEMP) and a Pollution Prevention Plan (PPP) will be put in place, adhering to the standards set out by SEPA and Comhairle Nan Eilean Siar. These documents will outline mitigation measures to reduce or nullify potential impacts on the ground and surface water environment.

The CEMP and PPP will address the following issues:

- Reinstatement and Restoration
- Decommissioning
- Contractor Duties
- Tool Box Talks
- Pollution Prevention and Mitigation
- COSHH
- Pollution Monitoring & Controls
- Site Waste Management Plan

## 7.5 Summary

A desk-based study and site walkover were conducted to establish the baseline hydrological environment of the site, whereby potential impacts from the development were identified.

It was determined that there were five categories of sensitive receptors within the study area, these being: Surface Water Features, including the Abhainn Eadarra and Loch a Siar and their tributaries; Class 1 and Class 2 peat; the Lewis and Harris Groundwater Unit; the West Coast of the Outer Hebrides SPA; and, Class 2 and 3 GWDTE communities.

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It is anticipated that careful design of the Site layout, and the implementation of the mitigation methods proposed, will ensure that any potential risks identified are avoided and the associated risk is reduced to acceptable levels.

## 8 Ecology

### 8.1 Introduction

The ecology and biodiversity assessment considers the potential impacts of the Proposed Development on habitats, flora and fauna. It details likely significant effects associated with the construction, operation and decommissioning phases of the Proposed Development.

The area within which the desk-based research and field surveys were undertaken varies depending on the ecological feature and its search/survey requirements. A desk study was undertaken to collate relevant public domain survey data, scientific publications, grey literature, and to obtain historical records of protected and relevant species of conservation interest and species and habitats protected by Scottish and European legislation from within the Site and surrounding environment.

There are four statutory designated sites located within 5km of the ESA boundary that have ecological qualifying features. One site, North Harris, is designated as a SSSI and an SAC.

There are no woodlands designated in the Ancient Woodland Inventory (AWI) and the Native Woodland Survey of Scotland (NWSS) within 2km of the Application Boundary. There are no conifer plantations listed within the National Forestry Inventory within the 2km buffer of the Application Boundary. There are no local biodiversity sites within the 2km buffer of the Application Boundary.

### 8.2 Site Habitat Summary

The habitats found within the Ecological Survey Area of the Proposed Development Site were mainly dominated by blanket bog, wet and dry heath and acid grassland, with mosaics of grassland and wet/dry heath, with running water, ditch systems and lochans. Habitats assessed as a GWDTE included the following:

- MG10a and M15a/c have moderate groundwater dependency (Class 2 GWDTE).
- M17b, U5e and H10b have low groundwater dependency (Class 3 GWDTE)

### 8.3 Site Protected Species Survey

Protected Species Surveys were undertaken in 2023 (Appendix 8.2) and encompassed all land within the Site in line with NatureScot guidance.

The Site provides suitable habitat for water vole, otter, mountain hare, reptiles and amphibians, albeit to varying degrees.

- Suitable habitat is present for otter on Site and no field signs were noted within the Application Site Boundary, however, otter droppings on rocks were recorded at Loch na Sgeireagan Mor. Otter are known to be in the general area. There is habitat connectivity with Loch na Sgeireagan Mor and the Site and otter can utilise the Site.
- No signs of water vole were recorded within the ESA.
- Two mountain hare were recorded during the survey period in the upland areas.
- The habitat present on Site provides good reptile habitat (moorland, stone outcrops) for species such as common lizard in discrete areas. Habitats were suitable for amphibians, such as, common frog in the wetter areas of vegetation (such as soft-rush and sharp flowered rush) and were noted occasionally during surveys.

## 8.4 Mitigation

The following actions are proposed for the Proposed Development:

- A suitably qualified and experienced Ecological Clerk of Works (ECOW) will be appointed to provide ecological and environmental advice during construction, including the monitoring of compliance with the recommendations of this EIA Report and subsequent planning conditions.
- Pre-construction surveys for protected species, such as otter, water vole, mountain hare and reptiles (e.g. common lizard) will be undertaken to provide up-to-date information about the distribution and abundance of protected species.
- Good practice design and construction and measures that will be outlined in the Construction Environmental Management Plan (CEMP) will minimise potential indirect effects of the Proposed Development on any GWDTes during the construction phase.

The Applicant has committed to the provision of a Biodiversity Enhancement Management Plan (BEMP) to reduce adverse environmental effects and to provide significant enhancements for important ecological features and biodiversity enhancement at the Proposed Development, and as a requirement in line with Policy 3 of National Planning Framework 4.

## 8.5 Summary

No significant adverse effects in EIA terms are considered to occur to habitats and protected species.

Following the application of mitigation, such as habitat management plans, species protection plans and standard working methods and good practice measures, such as a CEMP and pollution prevention measures, no significant residual effects are predicted. Therefore, embedded mitigation has been proposed to ensure the low significance of effects during the construction phase and to reduce the likelihood of legal offences and comply with good practice.

- Habitat Management and Monitoring Plans are advised to protect and enhance good quality habitat and effective hydrological connectivity for bog, upland habitats and watercourses.
- Biodiversity enhancement is proposed to secure positive effects for biodiversity under NPF4: Policy 3: Biodiversity and cross-cuts into other themes, such as Policy 5: Soils. Additional biodiversity measures are included and are of an ecological and practical nature and comprise of the most suitable and locally appropriate biodiversity measures specific to the location of the Isle of Harris, and the Proposed Development area. This will be managed and monitored via a Biodiversity Enhancement Management Plan (BEMP).
- Species Protection Plans have been advised in Appendix 8.2 for otter, water vole and mountain hare.

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

## 9 Ornithology

### 9.1 Introduction

The ornithology assessment evaluates the potential impacts associated with ornithology and designated sites as a result of the proposed repowering of the existing Monan Wind Farm during the construction, operation and decommissioning phases. It is proposed to replace three existing turbines (46m to tip) with three turbines of 86m to tip.

An initial desk-based search was carried out in December 2022, and continued in 2023. Designated sites and associated protected species at a local and regional level have been identified through that process. The surveys undertaken included vantage point surveys from February 2023 to January 2024 and breeding bird surveys. Collision Risk Modelling (CRM) was also undertaken. Species for these surveys included the following:

- Golden eagle
- White tailed eagle
- Red throated Diver

### 9.2 Survey Results

From an ornithological perspective following discussions with NatureScot and Comhairle nan Eilean Siar Council, Vantage Points were to be carried out for a period of 12 months with target species to predominantly include (but not limited to) golden eagle, white tailed eagle and red throated divers. Surveys were predominantly VPs to determine what Collision Risk Mortality could occur for surveyed species in particular eagles.

All three species are present in the area and it appears that the Site is a frequently used as a loafing/resting area for 1-3 individual white-tailed eagle at certain periods of the year. Golden eagle was very rarely seen within the 500m buffer but were frequently observed offsite to the north. There appeared to be limited interaction between the two species of eagles with golden eagle keeping clear of the turbine area. The golden eagles on Site have historically used three alternative breeding sites. Two of these nest sites are on crags more than 3km from the windfarm whilst one is approximately 600m from turbines. Data and correspondence from the Lewis & Harris Raptor Study Group indicates that breeding in the nearest eyrie to the Site was confirmed in 2019. Since then, survey work has not been carried out. Surveys in 2023 found that the nearby eyrie was not used and 2024 indicates that nest rebuilding is occurring at an eyrie 3km distance from turbines. The Lewis & Harris golden eagle population was recorded at 69 territories in 2015.

White tailed eagle was frequently recorded close to turbines both in flight and resting on the ground in close proximity to the turbines. The white tailed eagle population in Lewis & Harris has been on a rapid increase from 3 pairs in 2003 to 42 known territories in 2023. No breeding pairs are within 6km of the wind farm.

Red throated diver was observed during the breeding season with flights recorded between May-August. Breeding was unsuccessful and no focal VPs for divers was undertaken.

### 9.3 Predicted Effects

The proposal is for repowering and replacing three small turbines with three larger models with only a very small change in footprint. Therefore, habitat loss, disturbance and displacement will be very limited during construction. Therefore, habitat loss, disturbance and displacement will be very limited during construction. Given the small amount of habitat that is to be lost on Site and that this habitat is common in Scotland, the effect will be short term.

No CRM was identified for EA and that CRM for white tailed eagle were 1.0 birds killed during the lifetime of the project, effects will be short term as a result of the operational effects of the Proposed Development.

### 9.3.1 North Harris Mountains SPA

An assessment of potential impacts on the North Harris Mountains SPA which is designated for its golden eagle population is required by NatureScot.

Three turbines are already present on site to be replaced with three taller turbines with an increase in windswept area. Golden eagle are still present in the territory and have bred close to the turbines in recent years and that no CRM for golden eagle was recorded during 2023. Given these facts, the repowering with taller turbines would be considered not significant in the context of EIA regulations.

# 10 Telecommunications and Infrastructure

## 10.1 Introduction

The telecommunications and infrastructure assessment outlines the potential impacts of the Proposed Development in relation to telecommunications and infrastructure and highlights whether mitigation measures are required to minimise potential disruption.

## 10.2 Telecommunications Infrastructure

A telecommunications mast is located 426m south of T1. The separation distance between T1 and the telecommunications mast is sufficient to avoid any significant impacts on the mast.

## 10.3 Television

Following the digital switchover in 2009 and the cessation of analogue television signals being broadcast, any potential impacts are considered to be reduced and therefore it is not expected that there will be any significant effects on television as a result of the Proposed Development.

## 10.4 Utilities and Services

There is an underground fibre optic cable running through the Site which currently serves the operational turbines. Two 33kV overhead lines pass over the Site access track to be used as part of the delivery route for the Proposed Development. Mitigation in the form of an assessment undertaken by SSEN has been proposed to avoid impacts.

## 10.5 Summary

The Applicant will work closely with telecommunications operators to ensure that there are no unacceptable impacts on potentially unidentified links.

No impacts are anticipated on television infrastructure.

A GS6 assessment will be undertaken post-consent to ensure sufficient clearance distance from the identified 11/33kV lines crossing the access track.

The assessment demonstrates that the Proposed Development, following recommended mitigation, will not compromise any telecommunications, television, or utilities infrastructure.



# 11 Traffic and Transport

## 11.1 Introduction

The traffic and transport assessment outlines the potential impacts of the Proposed Development in relation to traffic, transport and access and highlights whether mitigation measures are required to minimise potential disruption.

## 11.2 Route to Site

Delivery vehicles will leave Port Arnish using Port Arnish Road and turn left to connect to the A859. Once on the A859 vehicles will travel southbound towards Breedon Ceann an Ora Quarry.

## 11.3 Construction Traffic

Construction activities will take place over approximately 4-6 months and the requirement for construction material deliveries will be spread throughout this period. Deliveries will be scheduled to avoid peak hours when the roads are busiest. Whilst delivery routes will vary depending on the source of the materials, it is expected that most vehicles will follow a similar route to the turbine delivery vehicles described above.

Following consent, an Abnormal Load Routing Plan and Construction Traffic Management Plan (CTMP) will be produced and agreed upon with CnES. These documents will lay out a finalised work programme, schedule of deliveries and any required management measures in detail.

## 11.4 Summary

A suitable route to Site has been identified to be viable, the finalised route will be presented as part of the Abnormal Load Routing Plan and CTMP. With the implementation of the proposed mitigation measures such as a monitoring plan and CTMP, no significant residual effects are anticipated regarding traffic and transport issues.

## 12 Other Issues

### 12.1 Aviation and Radar

The aviation and radar assessment considers the potential effects of the Proposed Development on existing and planned military and civil aviation activities, including those resulting from impacts to radar and the potential effects resulting from the physical presence of the turbines as obstacles.

No impacts are anticipated to Stornoway Airport and NATS Primary Surveillance Radar.

The Site is located within a Low Priority Low Flying Zone. However, Aviation impacts are manageable, with the mitigation specified leaving no residual impacts. In anticipation of a safety lighting condition made by the MoD, as made clear through the scoping response and recent consultation, the turbines will be fitted with MoD-approved 25cd infra-red lighting.

Mitigation has been identified to address the anticipated impacts on the MoD Low Flying Zone. The MoD conditional approval is subject to contractual agreement at the time of submission.

### 12.2 Decommissioning of the Operational Scheme

This section outlines the various steps and processes involved in removing the existing turbines at the Site.

Before the decommissioning phase begins it is anticipated that ground works and infrastructure for the Proposed Development will be put in place before the removal of the existing wind turbine and above-ground infrastructure. After the existing wind turbines and above-ground infrastructure are removed, reinstatement works will begin.

Additionally, much of the plant equipment used for the decommissioning of the existing turbines such as cranes, mobilisation and welfare setups will be used within the construction phase of the Proposed Development.

Upon decommissioning of the existing wind turbines, the access track which leads to Loch na Learga will remain, to provide recreational amenity for local walkers.

Before the existing turbines are removed from the Site the components, groundworks and infrastructure will be stripped of any recyclable materials such as steel, iron, and copper. Metals and composite materials will be identified, categorised, and recycled and/or disposed of.

### 12.3 Safety

This section outlines the procedures that will be put in place and followed to ensure the safety of the workforce and the public, specifically in relation to the following:

- Approach to safe operation and maintenance;
- Turbine safety;
- Safe operation;
- Safety during adverse weather conditions; and
- Public safety.

The development Site is an area of open upland moorland. In terms of access, the potential for interaction between members of the public and the development is low. The Site's location has been given detailed consideration throughout the design process and appropriate separation has been included between all infrastructure elements and the nearest residential receptors, paths, public rights of way and any other access points to the development Site.

## Non-Technical Summary

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The assessment undertaken shows that there are no likely significant effects on human health through the safe operation of the Proposed Development.

## Non-Technical Summary

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### Registered Office

Green Cat Renewables  
Stobo House  
Roslin  
Midlothian  
EH25 9RE

+44 (0) 131 541 0060

info@greencatrenewables.co.uk  
www.greencatrenewables.co.uk