West of Orkney Windfarm

WELCOME

Welcome to the virtual public exhibition and consultation for the West of Orkney Windfarm.

This is the first of a number of public consultation events designed to keep local residents and other interested stakeholders up-to-date and obtain feedback as the Project progresses. As this is our first public event, we would like to introduce the Project and its partners, illustrate the work we have done to date, and outline the surveys and studies ahead.

We are committed to working with local communities and stakeholders to help shape our proposal and we invite you to join one of our live Question & Answer sessions or make comments through our feedback form.

This consultation is virtual to minimise the risk of transmitting COVID-19 in the local community. However, the exhibition layout is similar to a traditional public exhibition with information boards about the proposal and instructions on how to provide feedback or find out more information.

WHO ARE WE

The West of Orkney Windfarm is being developed by Offshore Wind Power Limited (OWPL) which is a joint venture owned by three companies:

GREEN INVESTMENT GROUP

Owned by Macquarie, the world's largest infrastructure investor, with ownership of over 40% of UK's operational offshore wind farms.

TOTALENERGIES

One of the largest offshore operators on the UK continental shelf, majority owner of Seagreen Offshore Windfarm and the Shetland Gas Plant.

RIDG

Scottish offshore wind project developer with over 40 years' experience in the sector, set up to deliver high value projects alongside strategic partners.

LIVE QUESTION & ANSWER SESSIONS

The Project team will be available to answer any further questions you may have via live webinars which will be held on:

- Tuesday 29th March, 12noon-2pm
- Tuesday 29th March, 6pm-8pm

FEEDBACK

You can provide feedback on the proposal through the feedback form in this virtual exhibition which is located on the table in the middle of the hall. This is the first of a series of events that we will hold at key stages during the development of the proposal. This will include pre-application community consultation events which will take place before we submit planning and associated consent applications.

FURTHER INFORMATION

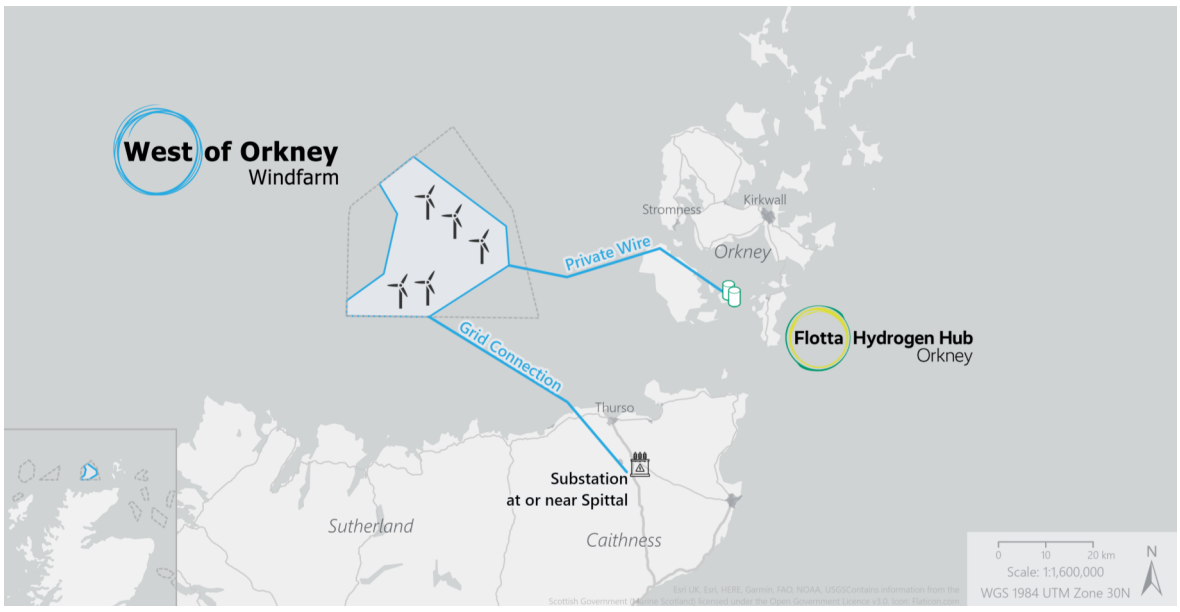
Our website **www.westoforkney.com** provides further information about the Project and will be updated with details about upcoming events. We would love to hear from you so please do not hesitate to get in touch, either by completing the feedback form or emailing us at **info@westoforkney.com**

West of Orkney Windfarm

WEST OF ORKNEY WINDFARM

THE PROJECT

The West of Orkney Windfarm is located approximately 30km off the coast of Orkney and around 25km north of the Scottish mainland. The expected capacity of the windfarm will be 2GW with first power generated in 2029.



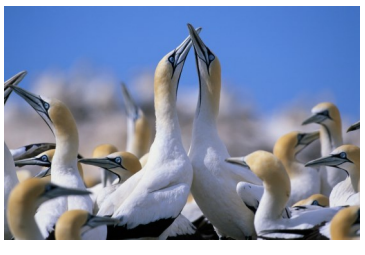
The Project has a grid connection agreement with National Grid for a connection in Caithness. Additionally, the Project partners are exploring an option to power the Flotta Hydrogen Hub. There is a potential for both power export options to be utilised. The map illustrates the areas within which project infrastructure may be located.

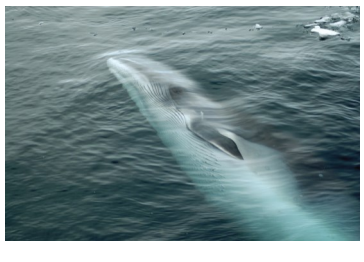
The windfarm will be located in the N1 Plan Option (PO) area which was identified as a potential site for offshore wind development by the Scottish Government through its marine planning process.

The area proposed for deployment of the wind turbines, known as the Option Agreement Area (OAA), was developed through an iterative mapping exercise avoiding key constraints, supplemented by consultation with key stakeholders. The constraints analysis resulted in an OAA that both maximises the potential for renewable energy production, whilst retaining flexibility ahead of final design to accommodate technical and environmental considerations.

With a maximum capacity of 2GW, the West of Orkney Windfarm will require around half of the total option agreement area which extends to 657km^2. The wind turbine layout will be determined once the design optimisation process has been completed.

The Project is currently considering both fixed-bottom foundations and floating substructures for the wind turbines. This will be determined once seabed surveys are completed.





INVESTING IN SCOTLAND

The West of Orkney Windfarm is targeting 60% UK content throughout the Project's lifetime, with 40% coming from Scotland. This will be achieved by:

- Committing £140 million during the initial development phase to develop the supply chain and ensure high levels of content from Scottish and UK companies.
- Supporting significant employment opportunities and helping Scotland meet their net zero targets.
- Providing the renewable power necessary to generate green hydrogen at the proposed Flotta Hydrogen Hub on the island of Flotta in Orkney.

2 MILLION
HOMES SUPPLIED WITH ELECTRICITY

2029
TARGET FIRST GENERATION

2000MW
OF POWER WILL BE GENERATED

West of Orkney Windfarm

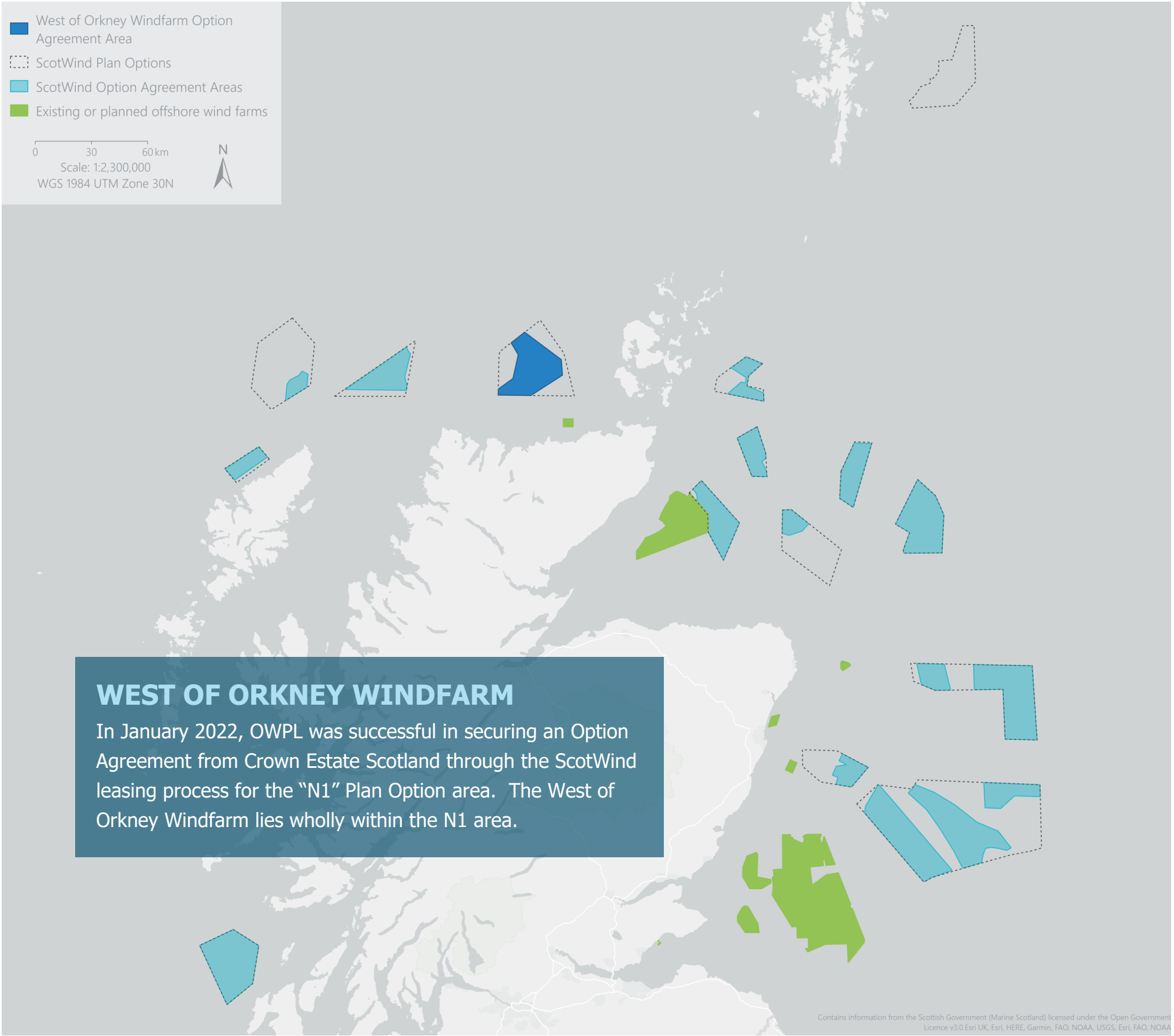
THE SECTORAL MARINE PLAN & SCOTWIND

THE SECTORAL MARINE PLAN

Following more than two years of extensive analysis, consideration and engagement with stakeholders, the Sectoral Marine Plan was published in October 2020. The Plan identified 15 areas known as Plan Options (POs) for the future development of commercial-scale offshore wind energy in Scotland. These POs were selected based on an iterative process of opportunity and constraints analysis including Strategic Environmental Assessment, Habitats Regulations Appraisal and Socio-Economic Impact Assessment, amongst other studies.

SCOTWIND LEASING ROUND

In November 2017, Crown Estate Scotland which is responsible for the management of marine assets in Scotland announced their intention to run a leasing round for commercial scale offshore wind energy projects in Scottish waters. This was the first offshore wind leasing round in Scotland for over a decade and was named 'ScotWind'. To inform the spatial development of this leasing round, Marine Scotland, as Planning Authority for Scotland's seas, was required to undertake a planning exercise, in accordance with relevant EU, UK and Scottish legislation.



WEST OF ORKNEY WINDFARM

In January 2022, OWPL was successful in securing an Option Agreement from Crown Estate Scotland through the ScotWind leasing process for the "N1" Plan Option area. The West of Orkney Windfarm lies wholly within the N1 area.

West of Orkney Windfarm

OFFSHORE PROPOSAL

Offshore infrastructure associated with the Project will comprise:

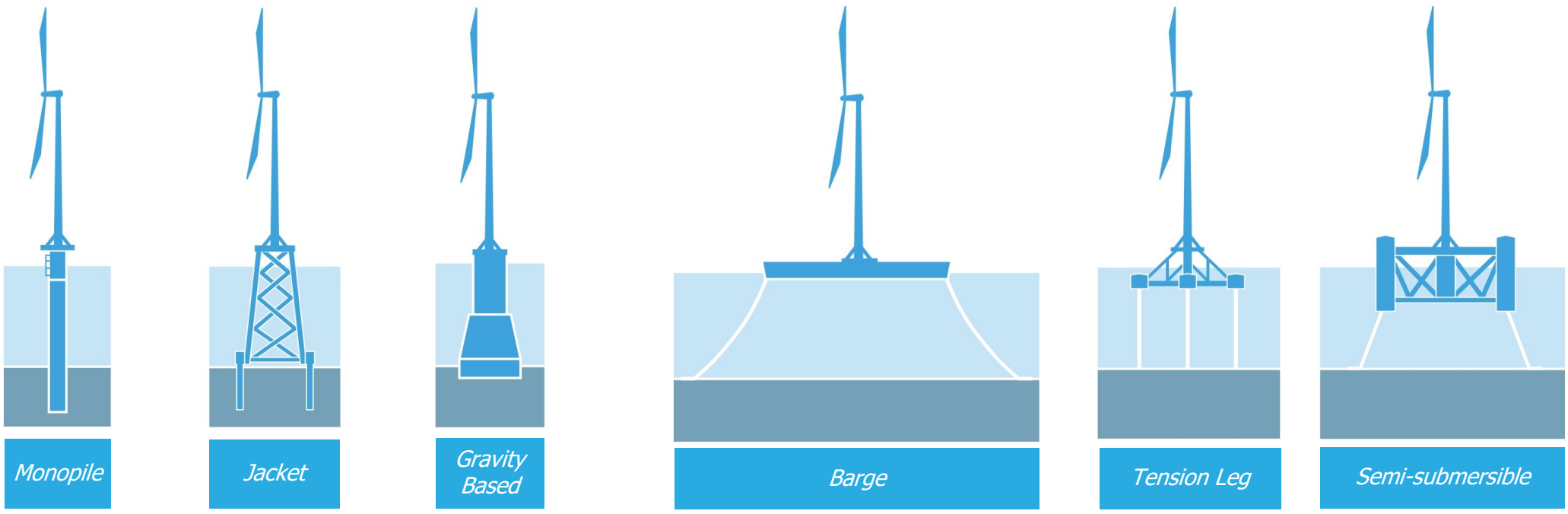
- The offshore array area which will include:
  - ⇒ Up to 125 wind turbine generators occupying approximately 50% of the Option Agreement Area and with a maximum tip height of 370 metres
  - ⇒ Turbine foundations/ supporting structures – fixed or floating
  - ⇒ Up to five offshore substation platforms
  - ⇒ Inter-array cables linking the wind turbines and offshore substation platforms
- Infrastructure associated with the export of power from the offshore array area which will include:
  - ⇒ Up to five export cables to Caithness
  - ⇒ Up to five export cables to Flotta, Orkney. These will cross both the offshore area west of Orkney and Scapa Flow and include onshore elements across the island of Hoy and potentially Fara

WIND TURBINE LAYOUT & EXPORT CABLE ROUTES

The wind turbine layout and export cable routes will be determined once the design optimisation process has been completed.

This process will balance a range of key factors including wind turbine choice, foundation structure, wind turbine spacing and wind direction, seabed characteristics, metocean conditions, benthic habitats navigational safety and fisheries considerations amongst other constraints.

Foundation options under consideration



Foundations fixed to the seabed

Floating foundations

West of Orkney Windfarm

ONSHORE PROPOSAL

Orkney coastline

Onshore infrastructure associated with the Project will comprise:

- Caithness:
  - ⇒ Onshore substation located at or near to the existing Scottish Hydro Electric Transmission (SHE Transmission) Spittal substation
  - ⇒ Up to five underground cables
- Orkney:
  - ⇒ Onshore substation located near to the existing Flotta Oil Terminal and proposed Flotta Hydrogen Hub
  - ⇒ Up to five underground cables to Flotta, across the islands of Hoy and potentially Fara

No overhead lines are planned for the Project.

It is anticipated that open-cut trenching will be the primary installation method, however this will be reviewed once the onshore cable routes are finalised. Horizontal directional drilling may be required, if obstacles are encountered, including sensitive features such as water courses and crossings with railways.

The onshore substations will include electrical equipment required to connect the project to the grid and/or the Flotta Hydrogen Hub. In addition to the area required for the footprint of the onshore substations, temporary working areas will also be required during construction.

Through the Environmental Impact Assessment process, and in consultation with the public and stakeholders, the locations of the Project infrastructure will continue to be refined. Further site selection work will be undertaken following the completion of survey work and additional technical, environmental, and commercial discussions and studies.

THE FLOTTA HYDROGEN HUB

- The Flotta Hydrogen Hub is a proposed green hydrogen production and export facility on the island of Flotta in Orkney.
- The Project would utilise a repurposed area of the Flotta Oil Terminal to create a green hydrogen hub which would offer new employment possibilities, a maritime low carbon refuelling port and significant inward investment.
- The electricity generated from the offshore windfarm will be used to power the Hydrogen Hub.
- The Flotta Hydrogen hub is a separate project to the West of Orkney Windfarm and will be the subject of a separate planning application.

Location of proposed Flotta Hydrogen Hub at the existing Flotta Oil Terminal

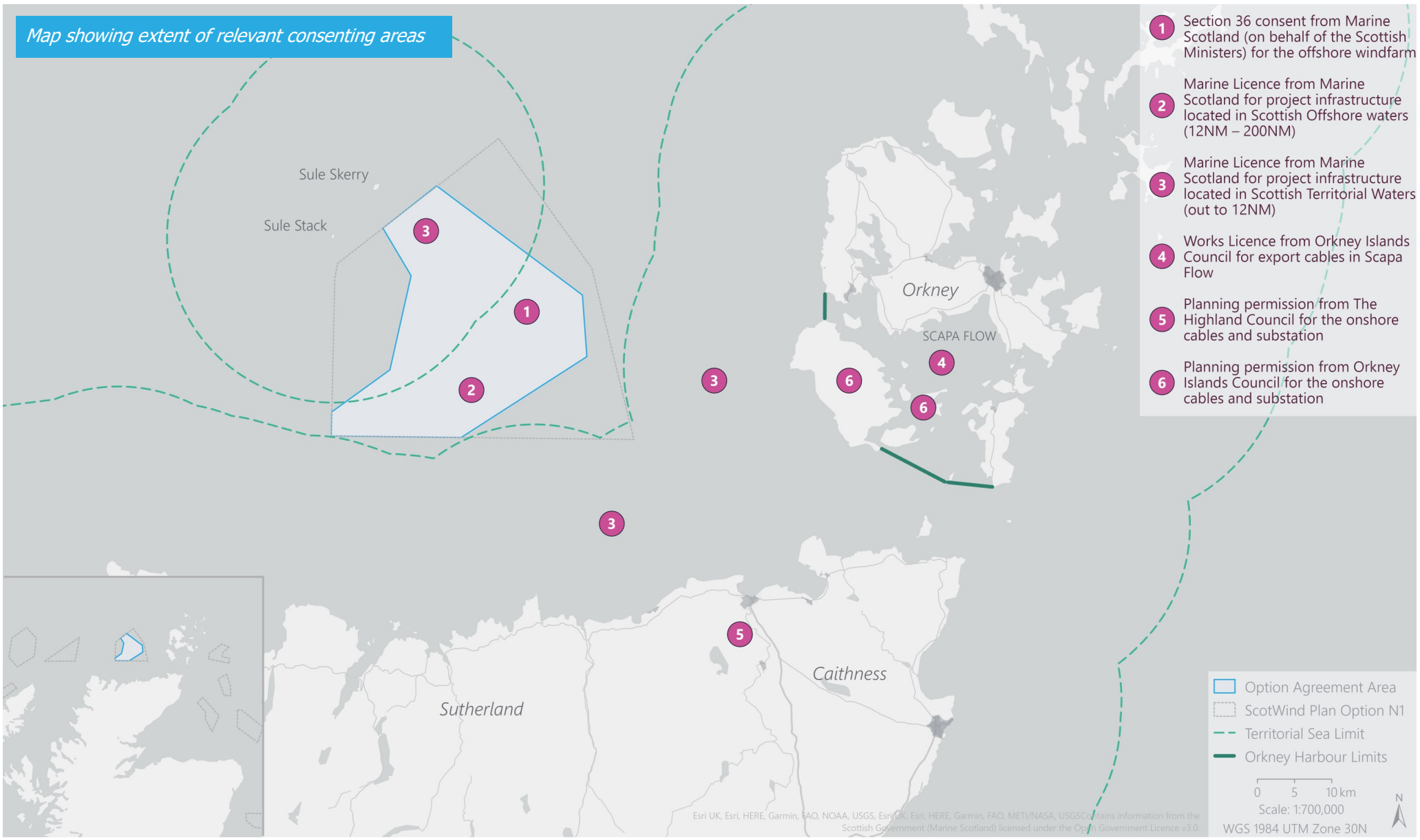
West of Orkney Windfarm

CONSENTS & ASSESSMENTS

PROJECT CONSENTS

The consenting process for the West of Orkney Windfarm and its associated infrastructure is quite complex as it spans a number of jurisdictions and regulatory frameworks. Scottish Ministers, through Marine Scotland, are the relevant decision makers for the offshore consents and licences. The Highland Council (THC) and Orkney Islands Council (OIC) are the decision makers for the relevant onshore consents.

Map showing extent of relevant consenting areas



ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

EIA is a process which identifies and assesses the potential environmental effects of a development. It informs the design of the Project from an environmental perspective and identifies mitigation measures to minimise and manage the impacts of the Project on the surrounding environment.

One of the first tasks in the EIA process is to prepare a Scoping Report outlining the surveys and studies proposed, based on initial assessments. The Scoping Report for the West of Orkney Windfarm was submitted at the beginning of March 2022. The table outlines the topics proposed for consideration during the EIA.

Assessment	Offshore EIA Report	Onshore EIA Report
Physical Environment	• Physical & Coastal Processes • Water & Sediment Quality	• Geology & Hydrology • Air Quality, Noise & Vibration
Biological Environment	• Benthic & Intertidal Ecology • Fish & Shellfish Ecology • Ornithology • Marine Mammals & Megafauna	• Freshwater Ecology • Terrestrial Non-Avian Ecology • Terrestrial Ornithology
Human Environment	• Commercial Fisheries • Shipping & Navigation • Archaeology & Cultural Heritage • Military & Aviation • Seascape, Landscape & Visual • Other Sea Users • Socio-economics	• Land-use & Other Users • Archaeology & Cultural Heritage • Traffic & Access • Landscape & Visual

West of Orkney Windfarm

PROJECT SURVEYS

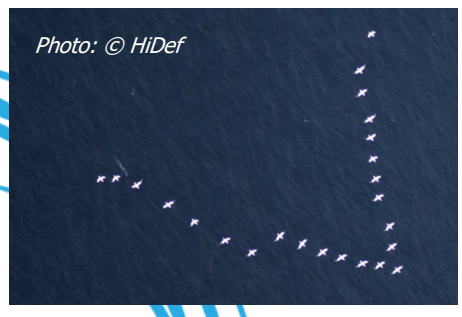
To further understand the local environment, guide the design of the Project, and inform the extent of any potential impacts it may have, a broad variety of surveys are being undertaken.

The Environmental Impact Assessment Report will present the findings of these surveys along with proposed mitigation and management measures. The table below outlines the key surveys associated with the Project.

AXYS floating LiDAR system

MMT survey vessel OSV Relume

Survey	Purpose	Status
Geosciences	• Geophysical and geotechnical surveys to understand the physical characteristics and technical stability of the seabed. • These surveys inform wind turbine foundation / substructure design and offshore cable routing.	Ongoing
Metocean	• Variety of equipment installed offshore and onshore to understand the wind resource and wave and tidal characteristics of the offshore array area. • These surveys inform turbine layout and foundation / substructure design.	Planned
Benthic	• Visual and sediment samples of the seabed to characterise habitats and species in the offshore array area and along potential cable routes to shore.	Planned
Seabirds & marine mammals	• Offshore aerial surveys to identify species present in the offshore array area and how their distribution and abundance varies across the site and between different seasons of the year, and between years.	Ongoing
Fish ecology	• Surveys to characterise those seabed habits and offshore areas important for fish spawning and juvenile fish.	Planned
Fisheries	• Engagement with the fisheries stakeholders to understand how the offshore array area and potential cable routes to shore are used.	Ongoing
Marine traffic	• Surveys of the offshore array area during the summer and winter to understand shipping activities and patterns.	Planned
Seascape, landscape & visual amenity	• Surveys to corroborate desk-based research, capture baseline photography from agreed viewpoint locations and undertake the assessment of potential effects.	Planned
Onshore ecology	• Surveys to assess the impacts on protected and sensitive habitats and species such as peat bog, freshwater habitats, birds and otters amongst others.	Ongoing
Archaeology	• Offshore geophysical data will be assessed by marine archaeologists. • Walkover surveys onshore to identify any previously undiscovered archaeological interests.	Planned
Other onshore surveys	• Walkover surveys to confirm land use and other constraints. • Potential traffic counts and baseline noise surveys depending on final project locations.	Planned
Socio economics	• Engagement with the local and national supply chain, and wider industry in order to ascertain positive and negative impacts which may result from the Project.	Planned



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STAKEHOLDER ENGAGEMENT

Effective engagement with stakeholders is the best way to deliver a sustainable Project that maximises economic and environmental benefits. The Project team is fully committed to engage early and regularly with stakeholders to build long-term relationships based on mutual trust and respect.

Whilst a key objective is to secure relevant consents with minimal delays, our ultimate aim is to create the best possible Project by sourcing expert technical knowledge alongside local insights and views.

We will not engage for the sake of engaging and instead will engage more intensively when new information is available or specific approval is required. The engagement schedule will therefore be aligned with the overall Project timeline.

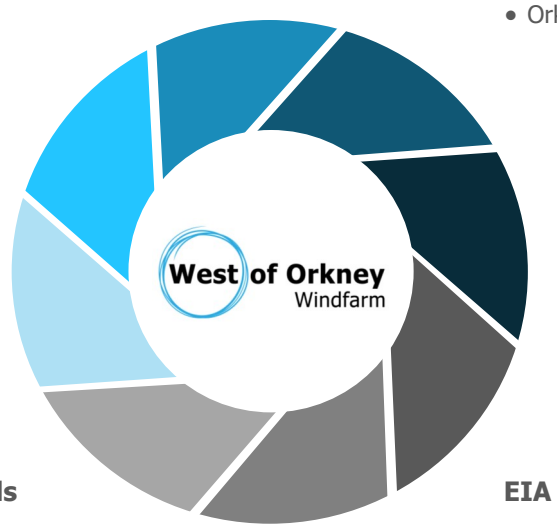
Early discussions with certain stakeholders started during preparation of the ScotWind bid and EIA Scoping Report and ahead of the offshore geophysical surveys. The Project team is now keen to meet with local communities and strategic stakeholders to share information about the proposals and find out your views which is why we have devised this virtual exhibition and associated live Question and Answer sessions.

Our initial understanding of the West of Orkney Windfarm's key stakeholders

Community
- Orkney Community Councillors
- Caithness & Sutherland Community Councillors
- Development Trusts
- Community Groups
- Local residents
- Media

Political
- Scottish Government
- UK Government
- Transboundary bodies

Regulators
- Scottish Government/ Marine Scotland Licensing & Operations Team (MS-LOT)
- The Highland Council
- Orkney Islands Council



Flotta Hydrogen Hub
- Repsol Sinopec
- Uniper
- EMEC

Grid
- Scottish Hydro Electric Transmission
- National Grid
- Ofgem

Supply Chain & Skills
- Orkney Harbour Authority
- Scrabster Harbour Trust
- Port of Cromarty Firth
- Energy Skills Partnership
- Global Energy Group
- JGC Fabrications
- Harland & Wolff
- University of Highlands & Islands

Stakeholder Working Groups
- Commercial Fisheries
- Marine Ecology
- Shipping & Navigation
- Seascape & Landscape
- Socio-Economic & Tourism

EIA Consultees
- NatureScot
- Scottish Environment Protection Agency (SEPA)
- Marine Scotland Science
- Historic Environment Scotland
- Northern Lighthouse Board
- Maritime & Coastguard Agency
- Non-statutory consultees

Indicative West of Orkney Windfarm Project timeline

March 2022 — Public consultation event 1

March 2022 — Scoping Report submitted

June 2022 — Receipt of Scoping Opinion

Q3 2022 — Offshore aerial bird & mammal surveys complete

Q3/ Q4 2022 — Pre-application public consultation events

Q4 2022 — Seabed surveys complete

Q3 2022 - Q1 2023 — Marine traffic surveys

Q1 2023 — Onshore surveys complete

Q4 2022 - Q1 2023 — Offshore EIA preparation

Q2 2023 — Offshore consents application

Q2/ Q3 2023 — Pre-application public consultation events

Q2/ Q3 2023 — Onshore EIA preparation

Q4 2023 — Onshore consents application

2024 — Consent determination

2027 — Commence construction

2029 — First power

We are very interested in hearing your views and would encourage you to complete a feedback form (located on the table in the 'virtual exhibition hall') or send us an email to: info@westoforkney.com