

MarramWind 

MarramWind Floating Offshore Windfarm

Consultation Four Booklet



Welcome

MarramWind is a proposed floating offshore windfarm off the north-east coast of Aberdeenshire. It could generate up to **3 gigawatts of renewable electricity**, enough to power over **3.5 million homes**.

This is the final round of pre-application consultation, following earlier events in 2024 and 2025. Feedback from each stage has helped shape the project design and environmental assessments.

This booklet explains the current design we plan to submit to Aberdeenshire Council and MD-LOT for approval at the end of 2025 and shows how the project has been refined based on technical, environmental, and stakeholder input.

We invite you to read it and share your views.

ScottishPower and Shell have over 70 years’ combined experience in Scotland’s offshore environment, with over 50 years’ experience offshore in the North Sea. We also have over 15 years of combined experience in floating offshore wind energy. As world-leading energy developers, we bring together, a long history of working in Scotland, and an innovative approach to delivering offshore energy projects.

About ScottishPower

ScottishPower is part of Iberdrola Group, a global energy leader and a major producer of wind energy. Responsible for progressing Iberdrola Group’s renewable energy projects in the UK, ScottishPower manages the development, construction and operation of windfarms throughout the world and currently has 40 operational windfarm sites generating over three gigawatts (GW) of renewable energy.

ScottishPower continues to be one of the leading renewables developers in the UK and is investing up to £24 billion between 2024-28 across networks, offshore and onshore wind and solar generation, increasing home grown green electricity generation in the UK to support energy security.

Focused on wind energy, smart grids and driving the change to a greener future, ScottishPower is the first integrated energy company to generate 100% green electricity in the UK.

About Shell

Shell has a history in the UK that dates back 125 years, with over 50 years’ experience delivering complex offshore projects in the North Sea. Shell is committed to ensuring the future success of wind projects in the UK.

Shell aims to continue to be a major investor in the UK energy system in the years ahead, providing the fuels that people rely on today, such as oil and gas, while pushing forward with the low and zero carbon products and services that our customers will need in the years to come.

Shell contributes to supporting energy security and economic value with a target to become a net zero emissions energy business by 2050.

About MarramWind Floating Offshore Windfarm



The proposed MarramWind floating offshore windfarm will consist of between 126 - 225 floating wind turbines, situated in deep waters approximately 75km off the north-east coast of Aberdeenshire at its nearest point.

The windfarm will be built in an area called Plan Option NE7, which was identified in the Scottish Government’s Sectoral Marine Plan - Offshore wind Energy, 2020. The site covers 684 square kilometres, with water depths between 87 and 134 metres.

The renewable electricity generated by the windfarm will play a pivotal role in achieving Scottish and UK net zero targets for 2045 and 2050 respectively, while also supporting energy security and promoting energy innovation.

The project will connect to the national grid via the proposed Scottish and Southern Electricity Network’s (SSEN) Netherton Hub substation to the west of Peterhead. This was confirmed by National Grid in their Holistic Network Design (HND) report and subsequent follow up exercise. Netherton Hub is a separate consented project and does not form part of the MarramWind application.

Project Boundary

Our project has defined a search area boundary, shown in the map below. The boundary has been gradually refined in response to stakeholder feedback and other technical and commercial considerations over the last three years.

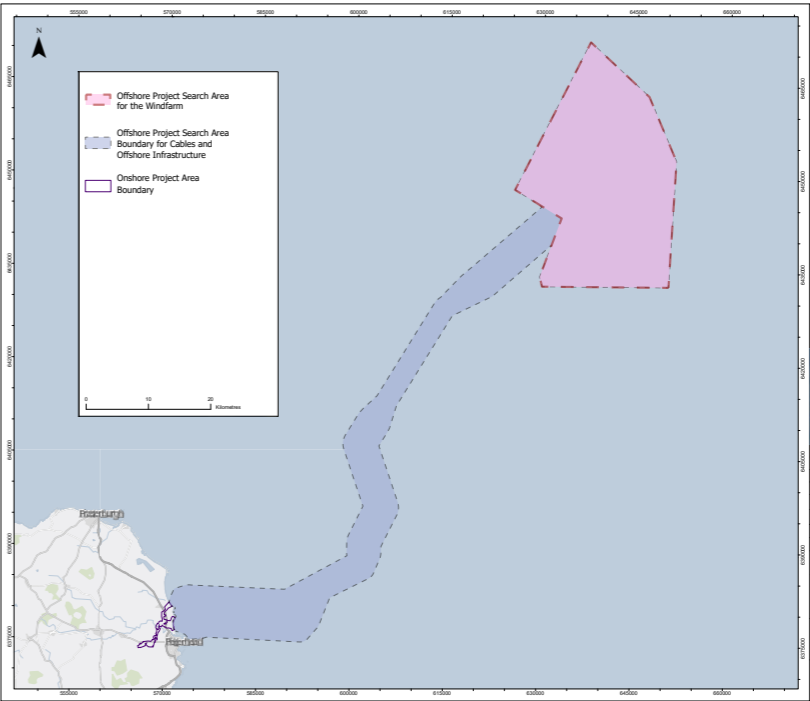
Environmental Impact Assessment (EIA)

Before our project can be built, we’re carrying out a detailed Environmental Impact Assessment (EIA) to understand the potential impact of the project on the environment and local communities.

The EIA looks at all stages of the project lifecycle—construction, operation, and decommissioning—and helps shape the design of the windfarm by including specific measures to avoid or reduce environmental effects wherever possible. We’ve worked extensively with stakeholders, carried out technical surveys, and consulted with experts to make sure our assessments are robust.

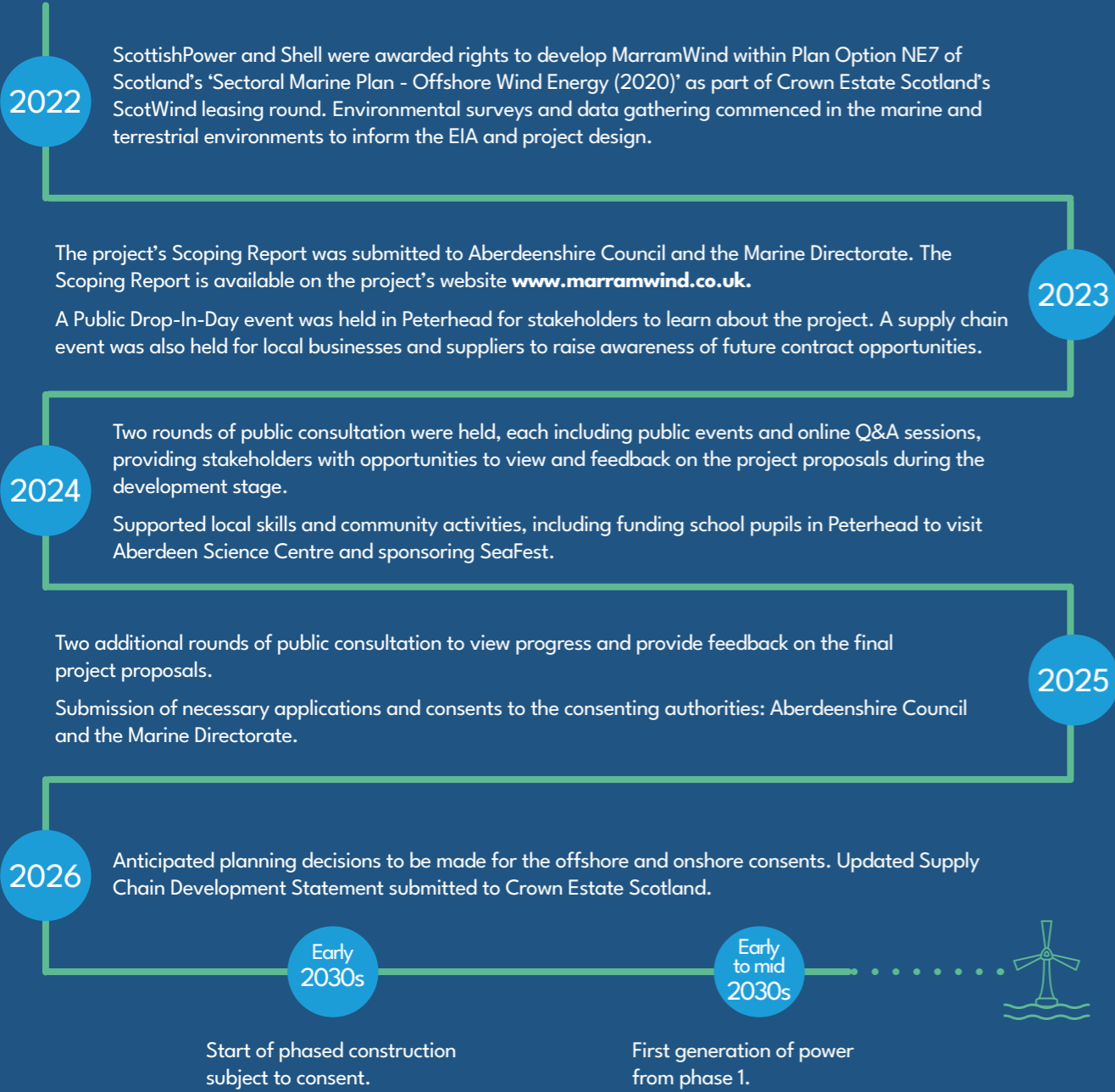
We are also following best practice by applying a “mitigation hierarchy”, which means we aim to avoid, reduce, or offset any environmental effects. These commitments will be included in a register and secured through conditions in any consents or licences granted by consenting authorities.

We are currently producing an EIA report as part of our consent application. This report will be assessed by Aberdeenshire Council and Scottish Ministers as they decide whether to approve the project.



Project Programme

Developing the project involves significant work, but our priority is to deliver a project that minimises effects on local communities and the environment, while delivering the renewable energy needed to power the country now and in the future. The programme below sets out the process and anticipated timeline from development through to first power.



Offshore

How We'll Get the Electricity to Shore

The wind turbines will produce electricity that's sent by subsea cables to land, then on to the project's substation site (please refer to the onshore infrastructure section for more detail) and into the national grid at the SSEN Netherton Hub.

We're looking at two ways to do this:

- HVAC (High Voltage Alternating Current) – commonly used for shorter distances.
- HVDC (High Voltage Direct Current) – better for longer distances because it reduces electrical losses.

HVDC needs special converter stations offshore and onshore to switch from DC to AC. If HVAC is chosen, up to two Reactive Compensation Platforms may be needed to help with power transmission, placed halfway between the offshore and onshore substations.

Floating Wind Turbines

We haven't chosen the exact wind turbines yet, as technology is advancing quickly, but each turbine could produce up to 25 megawatts (MW) of power.

Depending on the final turbine design, the windfarm is expected to have between 126 to 225 turbines.

Wind turbine specifications will also vary depending on the size, as follows:

- Turbines could be up to 350m tall.
- Rotor diameters will range from 236m to 326m and the maximum rotor blade width is 5.1-10m.
- The turbines will have three blades, each between 115- 155m long.
- Safety lighting will be added to the turbines and floating units to help ships and aircraft see them in low light, following official guidelines.

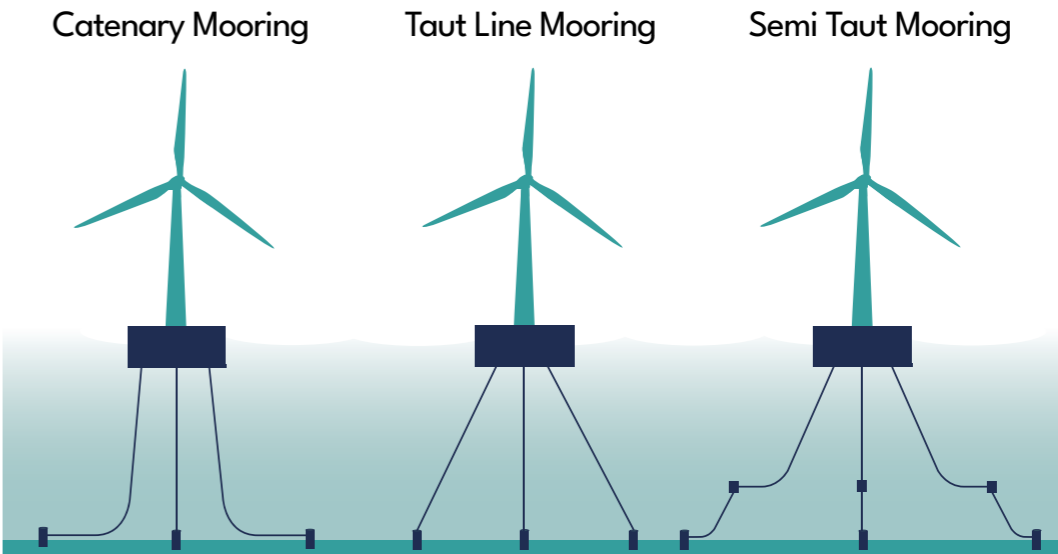
Mooring and Anchoring

Each wind turbine will sit on a floating unit, held in location by mooring lines and anchors. Up to eight mooring lines may be used per unit. The number of mooring lines and type of anchors will depend on the floating unit design and seabed conditions. Geotechnical and other surveys will be carried out to find the best options for the site.

We're exploring three mooring options:

- **Catenary** – slacker lines than other options, making them suitable for areas where the water depth changes but may involve the moorings resting directly on the seabed.
- **Taut line** – the tightest lines that use less seabed space than catenary moorings and keep turbines stable.
- **Semi-taut** – a mix of both catenary and taut moorings, with shorter lines requiring less seabed space.

The final decision will depend on the latest technology available at the time of construction and will also consider effects on marine life, fishing areas, and seabed habitats.



Offshore Platforms and Substations

Up to four offshore platforms will be built to house electrical equipment and connect the wind turbines to the cables that send electricity to shore. The number and type of platforms will depend on whether HVAC or HVDC technology is used (or a combination of both) and the layout of the windfarm area.

Export Cable Corridor

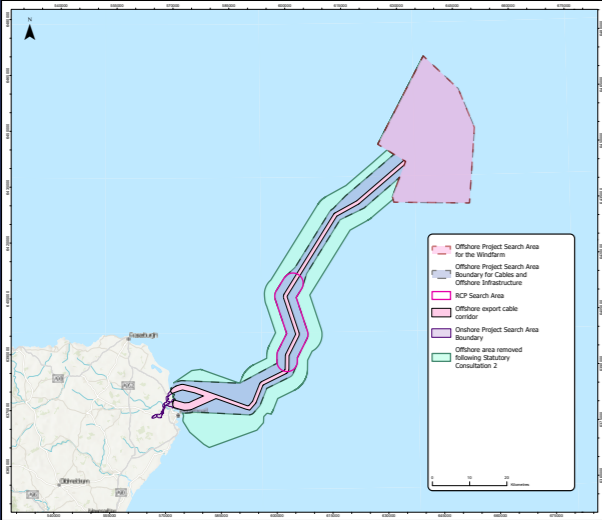
We're finalising the underwater cable route to connect the windfarm to shore, ensuring it's environmentally sensitive and technically feasible.

We've consulted with NatureScot, fishing groups, and the Maritime and Coastguard Agency to understand potential impacts. We're also working with other renewable developers to minimise disruption and maintain safe navigation during construction and operation.

Offshore and Landfall Cables

The type and number of cables will depend on whether AC or DC systems are used—or both. Where possible, cables will be buried under the seabed to keep them, and marine users safe. Cables will be installed in sections by a specialised ship, which also buries them 1–2 metres below the seabed where possible. In places where they can't be buried, other protection methods such as rock armour or concrete mattresses, will be used.

The offshore cable route could be up to 130–140 km long, depending on the final locations of the landfall and offshore substation sites. The offshore cable corridor is between 1–2 km wide but is dependent on water depths and will narrow in shallower water closer to the shore.



Landfall Refinement

For the landfall, an initial 70km stretch of coastline was narrowed to the area between Rosehearty and Sandford Bay. Three sites were assessed, with Scotstown and Lunderton (north of Peterhead) and Sandford Bay (south of Peterhead) identified as potential landfall locations.

Statutory Consultation 1

During the first round of statutory consultation in 2024, those three possible locations were considered for bringing the offshore cables to land.

Statutory Consultation 2

After reviewing feedback from Statutory Consultation 1 and conducting environmental and technical studies, Sandford Bay was ruled out as a potential location. The decision was based on its proximity to a protected seabird breeding area and the presence of several existing projects nearby, which would make it challenging to accommodate the necessary cables and infrastructure.

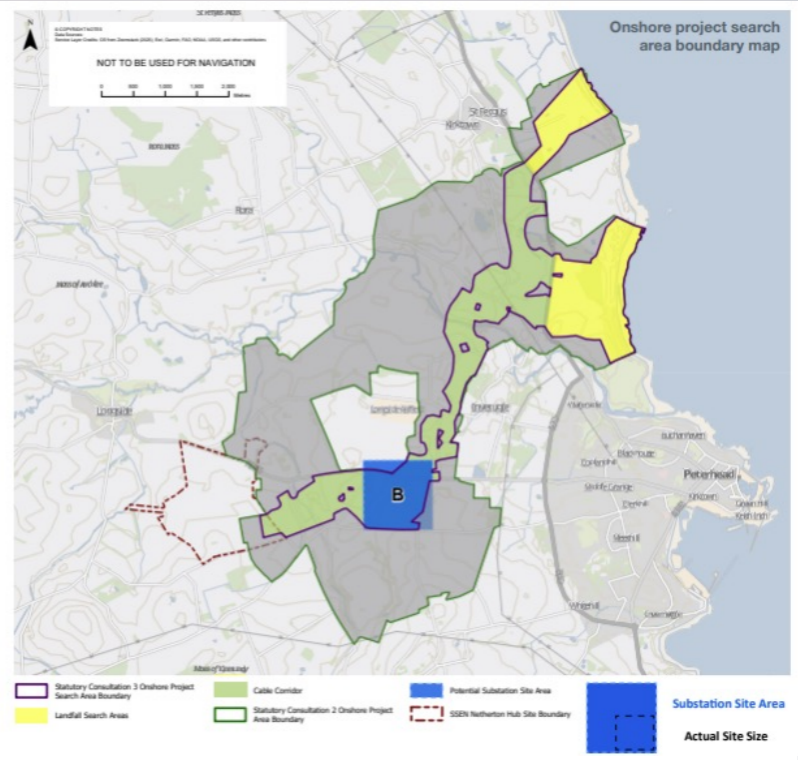
We also carried out a more detailed review of cable route options, with a particular focus on the southern route to Lunderton, to assess its feasibility and identify any potential challenges. Based on this review, both Scotstown Beach and Lunderton were considered suitable landfall locations, taking into account environmental and technical factors.

Preferred Option

The preferred option is to use just one landfall site, but a final decision hasn't been made yet. It will depend on:

- Space available for cables and infrastructure
- Coordination with other nearby developments
- Results from further surveys and engineering work
- Ongoing discussions with stakeholders

Keeping multiple landfall options gives the project flexibility to build the necessary infrastructure for a 3GW windfarm, while aiming to minimise cumulative and environmental impacts.



Onshore

The onshore infrastructure includes underground cables and an onshore substation site. The cables will run from the landfall(s) to the substation site and then connect to SSEN's Netherton Hub substation.

Onshore Cable Corridor

At the first stage of selecting the onshore export cable corridor, the grid connection location was still unconfirmed. A broad triangular

Scoping Boundary was defined to cover potential routes between landfall zones and possible substation sites near New Deer and Peterhead, including a 3km radius around New Deer and a 5km radius around Peterhead. Once the grid connection at SSEN's Netherton Hub was confirmed, routing options were refined, and two corridor branches emerged, east and west of Longside Airfield. The eastern route was preferred for its shorter

length, better access, and fewer constraints. It was further refined to avoid sensitive features and adjusted to reflect landowner boundaries, helping minimise environmental and cumulative impacts.

This route will link the landfall(s) to the SSEN Netherton Hub via the MarramWind substation.

Substation Site Location Refinement

Statutory Consultation 1

Early uncertainty around the location of our grid connection led the project to adopt a broad initial search area. Following confirmation of our connection into SSEN's Netherton Hub substation, the initial search area was refined to focus on a 3km radius around the Netherton Hub. During our first round of statutory consultation, we presented five potential substation sites for feedback. These options were identified through detailed environmental and technical assessments, as well as their proximity to the grid connection point, helping to ensure safe and reliable transmission of electricity to the national grid.

Statutory Consultation 2

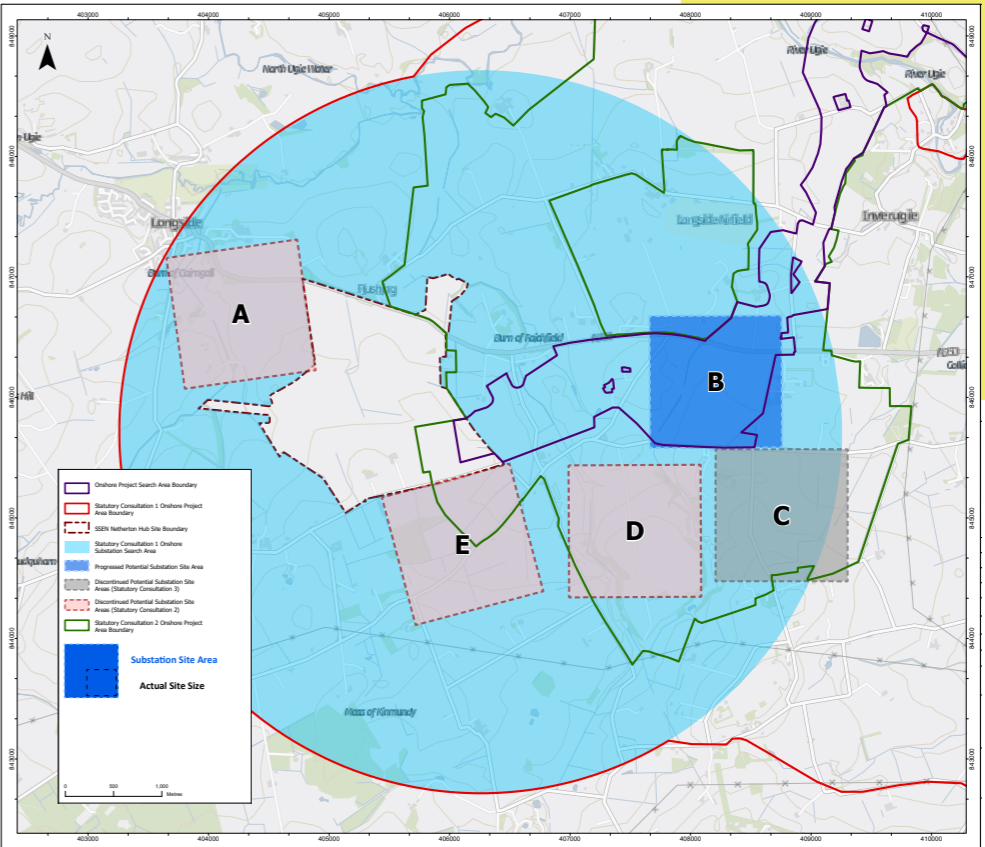
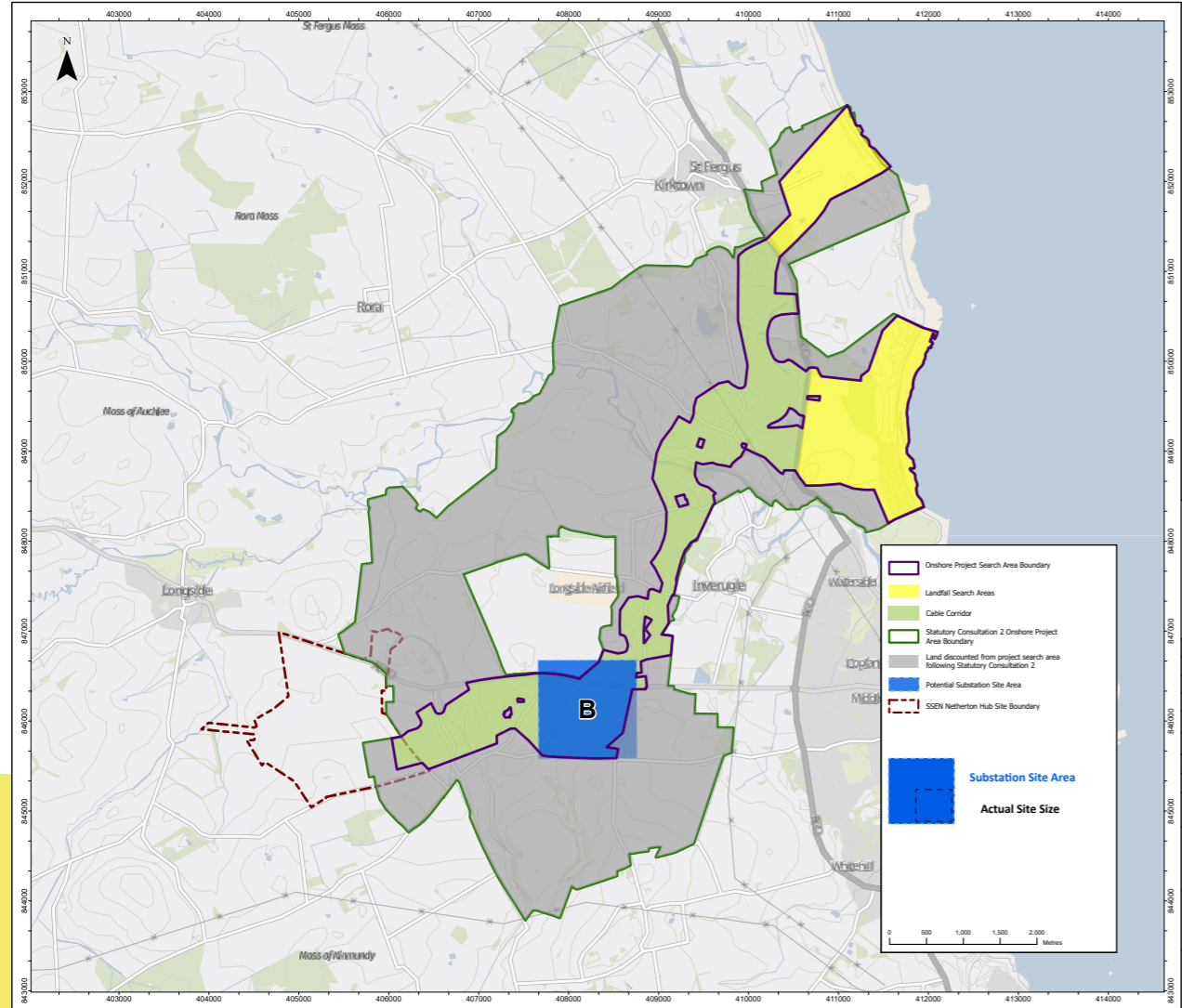
Following stakeholder feedback and further technical and environmental assessments, substation sites A, D and E were discounted as potential locations. Site options B and C were retained to identify a preferred onshore substation that provides sufficient space for its construction and operation.

Preferred option

Substation site option C was discounted following the second round of statutory consultation in 2024 and further work to identify the most appropriate site.

Site option B was ultimately selected due to its flat terrain, proximity to major roads, and semi-industrial setting. Public feedback to date has supported this choice, particularly noting the reduced traffic and visual impact in comparison to the other options that were under consideration.

Option B was presented during statutory consultation 3 and is now being progressed as the preferred location for the onshore substation. Further details on the iterative design and site selection process will be included in the Environmental Impact Assessment Report.





Onshore substation infrastructure

There will be three substations required for the project, all built on the same site—one for each phase of the project.

The substations may be fully or partially enclosed, depending on design, environmental studies, and feedback from stakeholders. They will include access roads, electrical equipment (like transformers and switchgear), and possibly HVDC to HVAC converters.

Substation infrastructure height will vary, with the maximum height up to 30 metres high in places. The final size and layout will be decided as the design progresses.

The site could cover up to 15 hectares, with an extra 3 hectares needed temporarily during construction. More land may be needed for drainage, landscaping, and environmental measures.

Visual screening

To help reduce the visual impact of the onshore substation, we plan to plant native trees around the substation site. This will create a natural green screen that blends into the surrounding landscape over time. The trees will help screen the substation from key viewpoints, support local wildlife, and contribute to improved air quality.

Illustrative conceptual design for a partially enclosed substation site (without visual screening)



Illustrative conceptual design for a fully enclosed substation site (without visual screening)



Feedback from Statutory Consultation 3

We've now completed three rounds of statutory consultation over 2024 and 2025, with approximately 350 people participating in our in-person events, virtual exhibition space, and online Q&As.

Our project team has reviewed and analysed the feedback from our latest round of consultation, held between 9 October and 19 November 2025. A summary of the feedback and our responses are included below.



Key Theme	MarramWind Response
Offshore Infrastructure You asked why an onshore substation is needed	Electricity generated offshore must be transmitted to land to meet consumer and industrial demand. The grid connection point was selected by NESO through a national planning process to optimise efficiency and minimise additional onshore infrastructure.
Jobs & Skills You highlighted the need for long-term job creation and training	We're working with educational institutions and training providers to promote careers in offshore wind. These efforts aim to build a sustainable local workforce that can support the project throughout its lifecycle.
Partnerships You suggested MarramWind work with the neighbourhood board and Port Authority	We're engaging with local organisations, including the neighbourhood board and Port Authority, to align our plans with community priorities. These partnerships help guide infrastructure development and ensure local voices are reflected in decision-making.
Traffic & Construction You raised concerns about road capacity for construction traffic	We're working closely with Aberdeenshire Council to develop a comprehensive Traffic Management Plan. This includes identifying suitable access routes, scheduling deliveries to avoid peak times, using on-site storage to reduce trips, and encouraging car sharing among workers. These measures aim to minimise disruption and maintain road safety.
Land Use, Visual Impact & Noise Request to avoid farmland and use wasteland	We've selected a site with existing industrial features and fewer residential properties to reduce visual and noise impacts. A detailed landscape and visual impact assessment informs our design, including native planting to enhance screening. Construction noise will be temporary and managed through best practices.
Fishing You asked about seabed disturbance and effects on crustaceans	Our Environmental Impact Assessment evaluates cumulative effects from all associated infrastructure, including substations and Battery Energy Storage Systems. We apply the mitigation hierarchy—avoid, reduce, offset—to manage environmental impacts. These strategies are documented in our Commitments Register and will be monitored throughout the project. We are also launching a strategic creel study with other Peterhead developers to establish a detailed baseline of crab and lobster fisheries, addressing local fishermen's concerns about the cumulative impact of multiple export cables on catch rates and fishing grounds.
Wildlife and Habitats You highlighted potential impacts	Our approach is informed by two years of ecological surveys. We aim to avoid sensitive habitats and schedule activities to minimise disruption during key breeding or migration periods. A Nature Positive Strategy will guide biodiversity enhancement, habitat restoration, and long-term monitoring to ensure positive outcomes for wildlife.
Consultation & Engagement You stressed the need for clear communication and inclusive engagement	We're committed to transparent and inclusive consultation and have provided responses to key issues raised after each consultation. Our outreach has exceeded statutory requirements, using multiple channels to reach diverse audiences. A full Consultation Report will detail how stakeholder input has influenced our plans.



How we'll build MarramWind

Construction is expected to begin in the early 2030s, if the project is consented. Because of the size of the project, the work will be done in phases, with each part of the infrastructure—onshore and offshore—installed sequentially. The onshore substation site will be built to match the timing of wind turbine installation and cable connections.

Wind turbines will likely be assembled at ports and then towed to site, where they'll be anchored.

Ports will play a key role in building and maintaining the wind farm. We're working with port operators and government bodies to explore options, and some port upgrades may be needed depending on the final design.

Offshore substations will be built near ports and lifted into place using specialist vessels. Workers will stay on vessels during construction and maintenance.

At landfall, where offshore cables come onshore, cables will be buried using trenchless methods to reduce surface disruption. Up to 345 metres of land may be needed at the shoreline, with underground joint bays connecting

the cables. Temporary compounds and access routes will be used during construction, and the land will be restored afterwards.

Onshore Construction
The underground cables will be installed in a temporary working area, around 89 metres wide from the landfall to the substation site and 99 metres wide from the substation site to the national grid. In some places, the corridor may need to be wider—up to 350 metres—especially where trenchless installation techniques (such as Horizontal Directional Drilling) are required.

Several temporary construction compounds will be set up along the route to support the work. These will include storage, parking, welfare facilities, and site offices. Once

construction is complete, the land will be restored.

Underground cables and associated ducts may be laid in either a single operation in trenches, or ducts may be installed in the trenches to allow the cables to be subsequently pulled through at a later stage. The trench is then backfilled.

The onshore substation site will include buildings, electrical equipment, drainage, and landscaping. Access roads will be built for construction vehicles, including large deliveries like transformers.

Accommodation needs for workers are still being considered, and any potential impact on local services will be assessed as part of the project's planning.

Benefits and Opportunities of MarramWind

Local and Regional Benefits

The project aims to create value in several ways:

- Contracts for local businesses during construction and operation of the windfarm.
- Investment in infrastructure, such as upgrades to ports, which will benefit other users too.
- A Community Benefit Fund to support local projects once the wind farm is operating.

We are committed to keeping as much of this value as possible in North-East Scotland and the wider UK. A £25 million Supply Chain Stimulus Fund has been set up to help Scottish businesses grow and take part in offshore wind development.

So far, over 90% of spending has gone to UK companies, with 40% going to Scottish businesses. We will continue to support local suppliers as the project progresses and will update our Supply Chain Development Statement in 2026.

Supporting Local Businesses

Since 2022, we have taken steps to raise awareness of opportunities and help businesses get prepared by:

- Hosting events to share project and industry developments.
- Meeting companies at industry conferences.
- Launching an online portal to help suppliers find contracts.
- Working with government agencies and industry groups to grow Scotland's offshore wind sector.

Although the project is at an early stage, we are actively engaging with suppliers to understand what goods and services will be needed. This will help guide future investments and support local innovation and skills.

Socioeconomic Action Plan

We are developing a Socioeconomic Action Plan to harness the local and regional opportunities and maximise the social and economic performance of MarramWind offshore windfarm. This includes:

- Creating jobs.
- Supporting local businesses.
- Helping communities build long-term wealth.

The team is consulting widely and welcomes feedback from anyone with ideas on how the project can leave a positive legacy.

Jobs and Skills

Offshore wind will create new job opportunities, especially for people moving from oil and gas. We will share more details as the project develops.

To help young people prepare, we are working with schools and colleges to support STEM subjects (Science, Technology, Engineering and Maths) and backing programmes like the National Energy Skills Accelerator to help people gain the skills needed for future energy jobs.

Community Benefit Fund

We want local communities to benefit from renewable energy. In earlier consultations, people said a Community Benefit Fund was the most important way to support local groups and projects.

We will work with stakeholders over the coming months and years to decide how this fund will be developed and delivered in a way that meets local expectations.



Providing your feedback

We welcome your feedback on our proposals. You can share your views by:

- Using the feedback form within the virtual exhibition space on our website www.marramwind.co.uk
- Email us your comments at stakeholder@marramwind.com
- Write to us at **FREEPOST MarramWind**.

This consultation will run from 30 October 2025 to 11:59pm 13 November 2025. Feedback received after the deadline may not be considered.

Next steps

All feedback will be reviewed and included in the Pre-Application Consultation report as part of our consent applications.

We plan to submit our consent applications at the end of 2025 to Aberdeenshire Council and the Marine Directorate who will determine whether to grant planning permission for the project.

During the representation period of the determination, you will have further opportunity to comment on our proposals.

Consultation event

We're holding a public consultation event. Our team will be there to share more information and answer your questions.

The event will take place on: **3 November 2025, Longside Football Club, Davidson Park, Station Rd, Peterhead AB42 4GR**



Staying updated

For the latest information on MarramWind:

- Visit our website www.marramwind.co.uk
- Follow us on X at [@MarramWind](https://twitter.com/MarramWind), or
- Email us at stakeholder@marramwind.com if you have any questions





www.marramwind.co.uk
stakeholder@marramwind.com