ECOWind

# Access to Offshore Windfarm Sites for Research

## Best Practice Guidelines

Produced by:

HMC
HOWELL MARINE CONSULTING

Funded by:

Department for Environment Food & Rural Affairs

UKRI Natural Environment Research Council

Offshore Wind Evidence + Change Programme

THE CROWN ESTATE

Crown Estate Scotland
Oighreachd a' Chrùin Alba

HMC
HOWELL MARINE
CONSULTING

# Access to Offshore Wind Farm Sites for Research

# Best Practice Guidelines

HMC
HOWELL MARINE
CONSULTING

## Table of Contents

These guidelines have been co-developed by representatives from The Crown Estate, Crown Estate Scotland, Scottish Government, Maritime and Coastguard Agency, Scottish Power, SSE Energy Services, RWE, Heriot-Watt University and the University of Southampton. The collaborative process and drafting was led by the ECOWind Champions team.

Acronyms

| | |
|---|---|
| **BESS** | British Energy Security Strategy |
| **H&S** | Health and Safety |
| **HSE** | Health, Safety & Environment |
| **MCA** | Maritime & Coastguard Agency |
| **MGN** | Marine Guidance Note |
| **NtoM** | Notice to Mariners |
| **OFTO** | Offshore Electricity Transmission Owner |
| **OREI** | Offshore Renewable Energy Installations |
| **OWEER** | Offshore Wind Environmental Evidence Register |
| **OWF** | Offshore Wind Farm |
| **PPE** | Personal Protective Equipment |
| **UKHO** | United Kingdom Hydrographic Office |

Units

| | |
|---|---|
| **GW** | Gigawatt |
| **km** | kilometre |
| **m** | metre |
| **nm** | nautical miles |

# 1 Introduction

## 1.1 What are these Guidelines for?

These guidelines have been developed to assist researchers and offshore wind farm developers in effective collaboration where access to offshore wind farms (OWFs) is required for research purposes. They emphasise effective stakeholder communication, illustrated through successful case studies.

The primary objective of these guidelines is to create a positive and productive environment for both industry and researchers, promoting innovation, knowledge sharing, and sustainable progress within the offshore wind sector. Adherence to these best practices enables the establishment of effective communication channels, mutual understanding, and safety considerations for accessing OWFs for research.

While not legally binding, these guidelines serve as a framework to promote agreed ways of working to establish trust and long-term collaboration between parties. It's important to note that each project may have unique requirements, and the guidelines may be updated over time to stay relevant and effective in line with advancements in research and the evolving industry.

For the latest version please refer to the ECOWind website[1].

## 1.2 UK offshore wind pipeline

Aspirations for offshore wind in the UK are high, to meet the demands of the British Energy Security Strategy (BESS), Scottish Government's sectoral marine plan for offshore wind energy and the UK's international climate change obligations. The BESS targets 50GW of offshore wind capacity by 2030, with a potential future need for 140GW by 2050 according to the Climate Change Committee.

Achieving this scale of development requires strategic approaches to assess environmental impacts and optimise the assessment process to meet national targets. By harnessing the expertise of leading academics and leveraging cutting-edge technologies, research efforts hold the potential to assist in mitigating environmental impacts and supporting strategic decision-making on a large scale. This multidisciplinary approach promotes innovation, optimises industry performance, and paves the way for meeting national targets efficiently.

## 1.3 What are the key benefits to a collaborative approach?

A collaborative approach can better inform strategic planning, benefiting multiple sub-sectors and their interests within the offshore wind sector. By recognising the significance of stakeholder engagement, the offshore wind industry can drive progress, enhance decision-making processes, and pave the way for sustainable and efficient development.

Potential benefits of inter-stakeholder collaboration include:

[1] https://ecowind.uk/

| | |
|---|---|
| Knowledge and insights: | Effective stakeholder engagement yields valuable knowledge for strategic planning of offshore wind, drives evidence-based decision-making, and leverages opportunities for robust and innovative advancements. |
| Technological advancements: | Collaboration with researchers keeps the industry informed about cutting-edge technologies and advanced techniques, leading to improved efficiency. |
| Addressing knowledge gaps: | Research provides evidence-based information for informed decision-making, reducing uncertainties and expediting the application process. |
| Cost savings: | Through innovation in methodologies, technologies, and practices, industry can identify cost-saving measures, resulting in reduced capital expenditures, operational costs, and maintenance expenses.<br>By addressing uncertainties, industry can effectively mitigate project risks and achieve cost savings by avoiding delays, redesigns, and inefficient environmental monitoring. |
| Enhanced reputation: | Inter-stakeholder collaboration demonstrates commitment to environmental responsibility, building trust, and enhancing credibility and expertise. |

The collaboration between researchers and the offshore wind industry results in a more sustainable, environmentally responsible, and socially accepted development process. Two examples of the positive outcomes of inter-stakeholder collaboration include the Offshore Wind Environmental Evidence Register (OWEER) and the ECOWind Programme.

### The Offshore Wind Environmental Evidence Register (OWEER)

The OWEER project helps encourage research activities that address key consenting risks for offshore wind development. OWEER prioritises knowledge gaps for different receptor groups (*i.e.,* benthic habitats, fish, birds and marine mammals) and facilitates the improved sharing of project findings by linking research projects to individual knowledge gaps. OWEER ensures that the knowledge base for the development of new OWFs is robust and comprehensive, helps target research effort to areas of importance to the industry, and reduces duplication of effort. By promoting collaboration and informing other offshore wind research programs, the project encourages stakeholders to work together, share knowledge, and collectively contribute to the advancement of the offshore wind industry's understanding and practices.

### ECOWind Programme

ECOWind exemplifies the benefits of inter-stakeholder relationships by bringing together experts from science, policy, and industry to address the complex relationship between offshore wind and marine ecosystems. Through the collaboration of scientists, policy experts, and industry representatives, ECOWind will ensure that research findings are directly translated into progressive policy measures. This close cooperation allows for the timely and effective implementation of evidence-based policies that promote optimal outcomes for both the climate and marine life.

# 2 The Regulatory Framework for vessel access to wind farms

## 2.1 Overview

Please note that the regulatory framework provided here is a general overview, and specific recommendations may vary depending on the unique aspects of each project. These are summarised in Figure 1 with further details added in following sections.

All vessels operating offshore must comply with the safety of navigation regulations (**Section 4.6**).

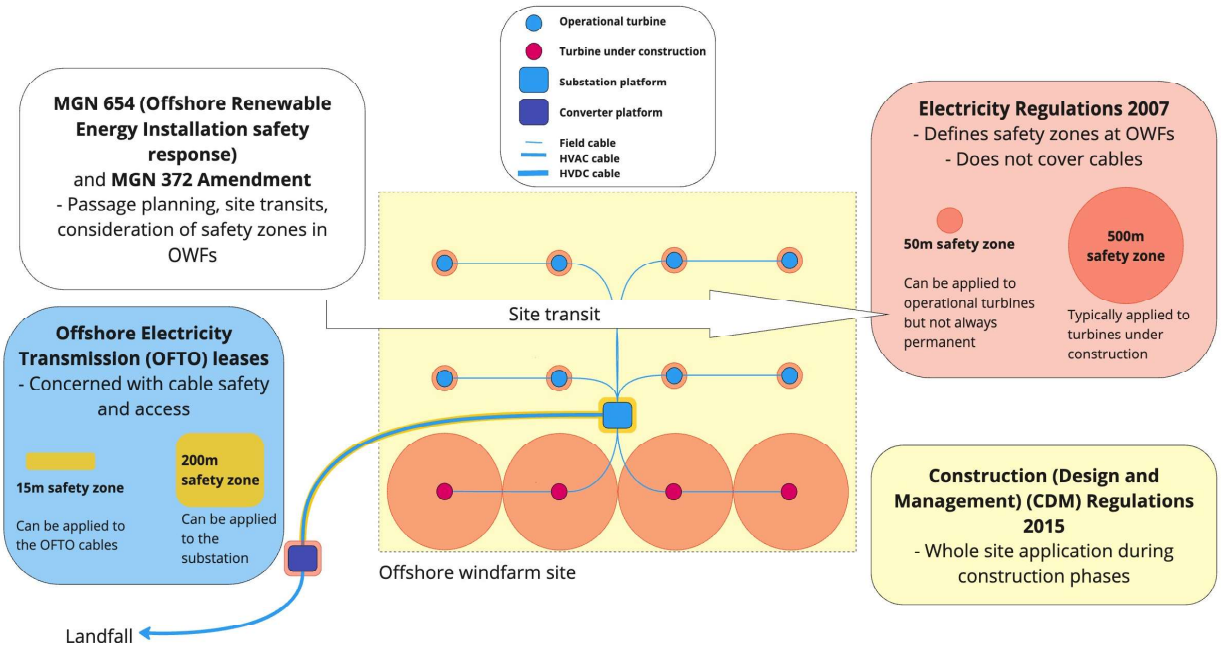


**Figure 1.** General summary of important navigational advice and regulations regarding access for researchers to OWF sites

## 2.2 Guidance

The Maritime & Coastguard Agency (MCA) provides guidance rather than regulations to developers and mariners on UK navigational practices, safety, and emergency response for offshore renewable energy installations (OREIs) in **MGN 654 OREI safety response**.

---

*"In the UK all vessels have freedom to transit through OREIs, subject to any applied safety zones, and their own risk assessments, which should take account of factors such as vessel size, manoeuvrability, environmental factors and*

*competency of the Master and crew. MGN 372 (or subsequent update) provides further guidance on navigation in and around OREIs."*[2]

It is important to note that while a vessel is on "transit" it may pause or deviate to carry out scientific activities while in the OWF. Collectively, both transits and associated scientific activities in OWFs must comply with merchant shipping legislation at all times when on passage. The MCA also provides guidance for mariners transiting in and around OREIs in MGN 372 Amendment 1 which highlights issues to be considered when planning journeys in the vicinity of OREIs.

## 2.3 Regulations

OWF Projects will apply for safety zones following The Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007 No.1948. These regulations define a standard safety zone as:

- 500 m from the wind turbine tower at sea level during construction; and
- 50 m in the case of ongoing operation of a wind turbine.

It is important to note that safety zones typically cover sections of the cable routes within the offshore windfarm site but do not apply to the cables themselves. In addition, under some circumstances a 500m safety zone may be applied post-construction (e.g., where there has been a health and safety incident at an operational site); therefore, as detailed in the table below, early and regular communication is strongly advised to understand safety zones and site-specific considerations.

Additionally, OWF projects follow the Construction (Design and Management) Regulations 2015, which require all vessels operating within a site to engage with the site developer on safety procedures. Application of these regulations is usually site-wide across an OWF.

### 2.3.1 Site access scenarios

Researchers need to be aware that access provisions may vary at different project phases, and specific requirements need to be considered when planning and requesting access.

Regulations and guidance for OWF access scenarios:

[2] Maritime and Coastgaurd Agency, 'MGN 654 Safety of Navigation: Offshore Renewable Energy Installations (OREIs) - Guidance on UK Navigational Practice, Safety and Emergency Response, 6.1.

| | |
|---|---|
| Access to OREIs respecting safety zones | • Vessels are permitted to enter OWF sites if they remain outside of the designated safety zones.<br>• Vessels have the right to deploy fishing gear or research equipment, provided they comply with any marine licensing requirements, standard vessel navigation safety practices and do not obstruct other users.<br>• For non-commercial scientific research activity within 12 nm of England, Wales and Northern Ireland, if research equipment interacts with the seabed consent may be required from The Crown Estate as well as the operators. Researchers should contact The Crown Estate for consent through the Seabed Survey Licence process and provide a method statement to the wind farm operator and Offshore Electricity Transmission Owner (OFTO) for approval, as appropriate for the research activity being planned. Non-commercial scientific research activity outside of 12 nm does not require consent from The Crown Estate but does require approval and engagement with the wind farm operator and OFTO, as detailed in this guidance document.<br>• For non-commercial scientific research activity within 12nm of Scotland, researchers should apply for a small works licence through Crown Estate Scotland's managing agents, Bidwells. More information about the process can be found here: Marine works - Coastal - Scotland's property - Crown Estate Scotland.<br>• All vessel masters are required to plan their passage prior to each voyage to identify risks and precautionary measures.<br>• Notice requirements need to be in place for any activities to warn other sea users (**Section 4.7).**<br>• It is strongly advised for researchers to communicate access plans with site managers to understand safety zones, project phases, and schedules.<br>• It is strongly advised that researchers collaborate with site managers, to understand the safety management system and procedures. |
| Access to wind turbines within safety zones | • Written permission from the OWF project is necessary to gain access to the site within safety zones.<br>• This permission falls under the OWF project permit and does not require a separate license.<br>• Detailed discussions need to be held with site managers to agree on a distance to turbines and equipment/methodologies to be used (**Section 4.3**).<br>• Notice requirements need to be in place for any activities to warn other sea users, and coordinated with the OWF project (**Section 4.7**)<br>• While health and safety (H&S) protocol requirements cannot be mandated, it is important to adjust measures and align as much as possible to ensure the safety of all involved (**Section 4.5**). |

## 2.4 Site-specific adaptability

In accessing OWFs for research purposes it is crucial to appreciate the site-specific nature of each OWF in question. Each site may have unique management systems as well as unique characteristics, including logistical and operational challenges, that must be considered. For example, turbines vary in capacities and sizes, with specific requirements and considerations in terms of safety protocols. Additionally, different access platforms including vessels or autonomous vehicles, may be involved.

Geographical and environmental factors, such as water depth, seabed conditions, weather patterns, and marine life, also play a significant role in planning and execution.

Researchers should work closely with industry at all phases of the fieldwork to identify, understand and address any site-specific and platform-specific challenges or constraints that may impact site access and data collection.

In addition to the considerations and engagement needed to conduct fieldwork at an OWF, other restrictions may apply to the supply cables and offshore substations. These assets are typically owned and operated by a different company, referred to as the Offshore Electricity Transmission Owner (OFTO). In England, Wales and Northern Ireland, owing to the seabed rights granted to the OFTO by The Crown Estate, permissions must be obtained from the operator for any works within 15 m either side of the supply cable (i.e., within the Designated Area). If research is planned within 200 m of the substation, the researcher needs to provide a methods statement to the OFTO and work with the OFTO to manage potential risks. For any works within 1 nm of the cable researchers should notify the OFTO prior to undertaking any research. To understand the requirements for a specific OFTO researchers should contact the OFTO directly; it is strongly advised that researchers collaborate with the OFTO at all stages of fieldwork planning and operations in order to understand site specific considerations as well as safety management systems and procedures. If contact information is unknown, The Crown Estate may be able to assist.

In Scotland, permissions must be obtained from the OFTO operator for any works within the relevant Designated Area, usually with an approved method statement. Designated Areas vary in size and it is therefore recommended to engage early with Crown Estate Scotland to determine the necessary permissions required for each specific OFTO. Crown Estate Scotland can be contacted via marine@crownestatescotland.com.

# 3 Stakeholder Engagement

## 3.1 Key OWF stakeholders

Understanding the key OWF stakeholders involved is central to effective coordination. In the project developer and operator team of OWFs, ('project' being considered as a development project and not a research project), there are various roles and responsibilities, including those related to survey work and accessing OWFs.

The key roles include:

| | |
|---|---|
| Project Asset Manager | Oversees the entire development and operation of the OWF. They are responsible for coordinating project activities, managing milestones and progress. |
| Site Manager: | Responsible for the day-to-day operations and management. They coordinate various activities, such as maintenance, repair, and inspections, and ensure compliance with safety and environmental regulations. Site managers often have authority over granting access to the OWF. |
| Health, Safety & Environment (HSE) Manager: | Responsible for implementing HSE policies and procedures at the OWF. They ensure that all fieldwork activities adhere to safety regulations, conduct risk |

| | |
|---|---|
| | assessments, and promote a culture of safety among the operational teams and contractors. |
| Marine Coordination Team: | Responsible for managing vessel traffic and ensuring the safety of operations at sea. They coordinate vessel movements, monitor weather conditions, and communicate with offshore personnel to facilitate efficient and safe access to the site. |
| Access Control & Security Personnel: | Access control and security personnel play a vital role in granting and managing access to the OWF. They ensure that only authorised personnel have entry, monitor site security, and enforce safety protocols. |

The process of getting specific contacts for site access in OWF projects involves several steps:

1. **Research**: Gather information about the Project's key stakeholders, including the Project Manager and Assistant Project Manager.
2. **Initiate direct outreach**: Craft a concise message introducing yourself, explaining your research interests and objectives and your data gathering methodology, and expressing your desire to collaborate.
3. Persistence is key when trying to establish contact with specific individuals. **Be prepared to follow up on initial outreach attempts**. If you do not receive a response, consider alternative communication channels or seek assistance from industry contacts who may have connections with the desired contacts.
4. **Letter of Support**: The culmination of successful discussions between the project's key stakeholders and the research team, showing what has been agreed in principle and good will for the next steps. It is useful to share ahead of future engagement as research continues, as it acknowledges support already agreed in principle.

### 3.2 Strategies for initial engagement

The initial engagement with stakeholders to gain access to a site for research purposes requires careful planning and adherence to certain guiding principles.

The following guiding principles serve as a starting point for effective communication when applying for site access to OWFs:

| | |
|---|---|
| Early engagement: | Be proactive and engage at the project's earliest stages, allowing time to understand stakeholder needs and expectations. The offshore wind industry typically plans operations at least 12 months in advance. |
| Transparency and clarity: | Ensure clear and concise communication and tailor communication to the needs and preferences of stakeholders. |
| Clearly defined objectives: | Articulate research goals and how they align with industry's broader goals.<br>Be specific and clear about your research proposal and data collection methods. |
| Value proposition: | Clearly communicate the value proposition of your research to industry including innovative solutions or improved decision-making capabilities.<br>Communicate the practical benefits of your research, such as improved performance or risk mitigation. |
| Proportionality: | Ensure your research proposal is fit for purpose.<br>Tailor your approach to meet stakeholders needs. |

| | |
|---|---|
| Tailor communication: | Understand the industry's language and adapt communication in a way that resonates with their objectives or strategic initiatives.<br>Understand their roles and areas of expertise. Adapt your language and presentation style to effectively communicate to diverse audiences, including technical teams, management, and decision-makers.<br>Agree upon a communication platform that will be efficient for both parties *e.g.,* preference for email, Teams channels, online meetings. |
| Evidence: | Support claims with evidence and showcase past research successes. |
| Capability: | Demonstrate the survey team's experience and provide information on the research vessel, navigational systems, equipment and relevant certifications. |
| Inclusivity: | Promote open dialogue, knowledge sharing, and joint problem-solving. |
| Stakeholder perspectives: | Respect the diversity of viewpoints and consider the broader social, economic, and environmental implications of the research project.<br>Strive for consensus and common ground where possible. |
| Feedback: | Listen actively to concerns and feedback, and address them transparently. |
| Timelines: | Agree on research results timelines and set milestones for progress updates (**Section 4.1**). |
| Adaptability: | Be flexible in adjusting research plans, methodologies, and timelines to accommodate changing circumstances. |
| Trust and confidentiality: | It is important to document the agreed-upon communication plan and data sharing protocols in a formal agreement or memorandum of understanding (**Section 3.4**).<br>Maintain trust among stakeholders by respecting confidentiality agreements and any sensitive information shared during the collaboration (**Section 3.6**). |
| Liability | Clarify the roles and obligations of each party involved (**Section 4.2**). |
| Innovation and creativity: | Encourage a culture of experimentation and continuous learning, encouraging new approaches and ideas. |

### 3.3 Case studies

The following case studies provide valuable insights and real-world examples of researchers collaborating with OWF developers:

Case study 1: ACCELERATE

The research project, "Ecological Implications of Accelerated Seabed Mobility around Windfarms," led by Dr. Katrien Van Landeghem from Bangor University, gained access to the Rhyl Flats and Gwynt-y-Mor OWFs, through collaboration with RWE. High-level discussions with RWE development and consent managers paved the way for communications with Rhyl Flats and Gwynt-y-Mor site managers. The research team engaged in multiple meetings, phone calls, and emails to address safety concerns and practicalities. The team prioritised safety and de-confliction measures, providing a detailed research plan, including locations, timings, vessels, captains and contact details. The research team's dedication to practicalities and safety not only enabled access to the sites but also facilitated an in-depth study at the turbine level, employing remotely operated vehicles to closely survey fouling communities on a monopile.

Case study 2: INSITE

Led by Professor Paul Fernandes from the University of Aberdeen, the research project "Fish Spillover, Production and Aggregation at MMS (FISHPAMMS)" was conducted as part of the influence of man-made structures in the ecosystem (INSITE) programme. The team informed SSE renewables of their plan to access Beatrice OWF. They provided the operator with a route plan and Uncrewed Surface Vehicle (XOCEAN) details, emphasising a one-time passage at a survey speed of 4 knots, while remaining between the turbines spaced approximately 1 km apart. The track of the XOCEAN access through the OWF and close proximity to the wind turbines is depicted in Figure 1.

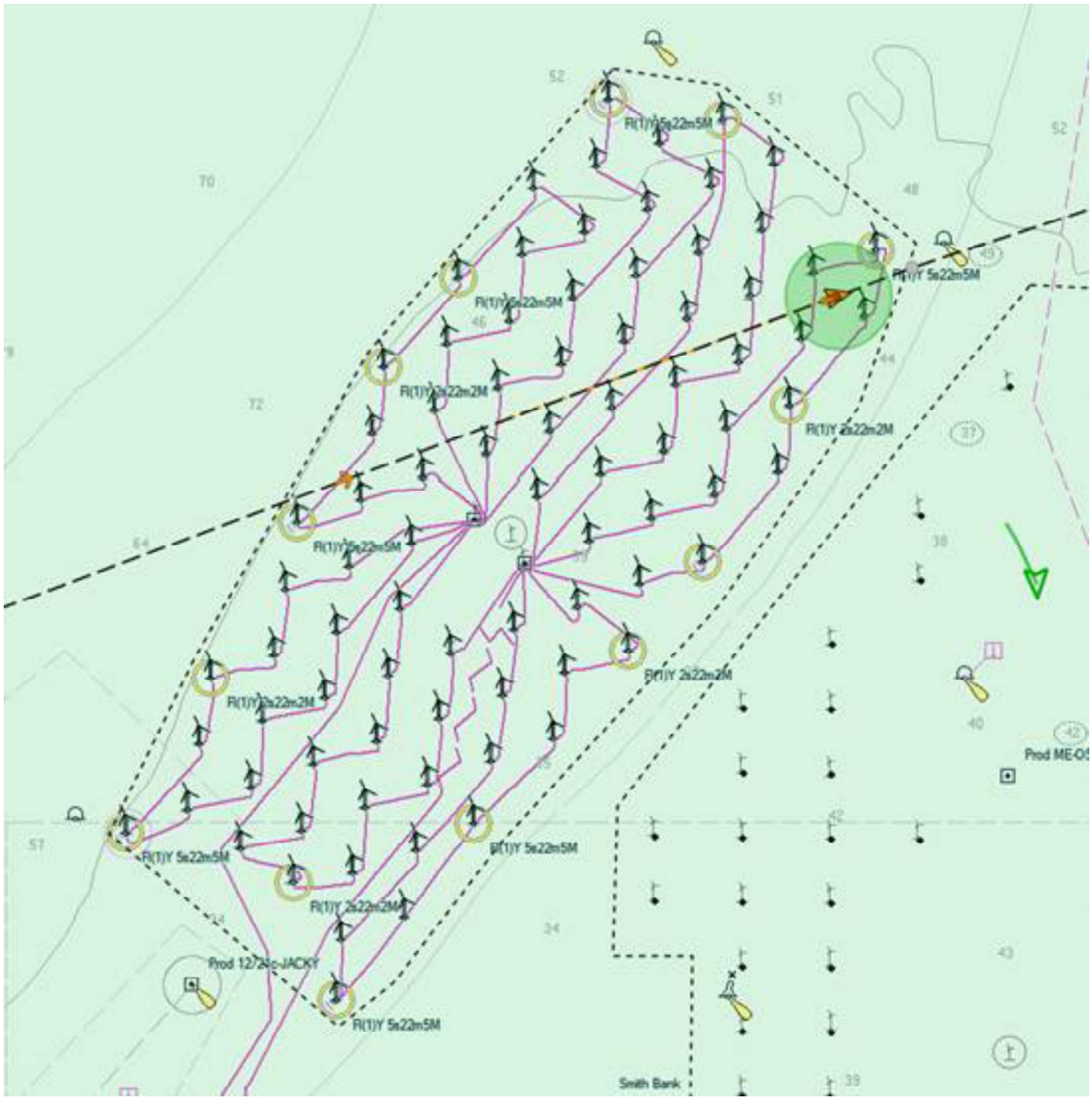


Figure 1. Map of the Beatrice OWF in the Moray Firth, north of Scotland. The dotted line shows the passage of the Uncrewed Surface Vehicle (XOCEAN, yellow arrow, in green circle) as it passed through the wind farm on 21 August 2021.

### 3.4 Data sharing

Agreeing to share data can be a strong incentive for collaboration between researchers and industry. By agreeing to share data, both stakeholders demonstrate their commitment to transparency, openness, and the advancement of knowledge in the field.

As a condition of development in the UK, offshore wind developers provide access to a range of operational data both before, during and after wind farm construction to both The Crown Estate and Crown Estate Scotland. This data is made available through platforms such as The Crown Estate's Marine Data Exchange. Data held and made publicly available by the developer can enable researchers to gain a comprehensive understanding of the environmental baseline conditions of a site, validate their research hypotheses and contribute to evidence-based decision-making.

Researchers should clearly communicate their specific data requirements to industry from the beginning, enabling industry to consider and accommodate any additional or more specific data needs they may have.

### 3.5 Reporting research findings

The following recommendations are made to support successful collaboration and reporting of research findings:

- Establish appropriate channels for sharing research results. This may include meetings, workshops, webinars, or online platforms. Consider the preferences and availability of all parties involved, and choose channels that facilitate effective information exchange and discussion.
- Agree on timelines for sharing research results and set milestones for progress updates.
- Develop protocols for sharing research data, ensuring compliance with data protection. Clearly define the scope of data sharing, including the type of data, access rights, and any restrictions or confidentiality requirements.
- Engage in a review and collaboration process with OWF projects before publishing findings.

### 3.6 Respecting confidentiality agreements

Confidentiality agreements may be necessary to protect sensitive information or data. Researchers must adhere to the terms of such agreements, ensuring that confidential information remains confidential and is not disclosed or used without proper authorisation. There can be specific issues with confidentiality for those subject to Freedom of Information legislation.

Care is needed to develop a suitable set of terms to protect any proprietary data (including the use of aggregations and anonymisation techniques where necessary). This step may require legal support to ensure a suitable data-sharing clause is prepared. Similarly, copyrights and trademarks should be respected to safeguard the ownership and exclusivity of innovative ideas, technologies, or research findings.

# 4 Collaborative Planning

## 4.1 Timing alignment

Timing alignment is crucial to ensuring that the research activities can be carried out effectively and in harmony with OWF operations. By synchronising schedules, researchers can optimise their data collection efforts while minimising disruptions to the ongoing operations of OWFs. To achieve this, the following steps are recommended:

- Initiate discussions and planning at least 12 months in advance where possible, to allow sufficient time for coordination and preparation.
- Align project timelines and milestones to identify suitable timeframes for site access.
- Consider the construction, operational, and safety zone schedules of the OWF project to identify windows of opportunity for research activities.
- Collaboratively determine the duration and frequency of site access visits to accommodate the needs of the research while minimising disruption to the ongoing activities.
- Regularly review and update the planning timeline to account for any changes, unforeseen delays, or circumstances that may affect the agreed-upon schedule.

## 4.2 Risks, responsibilities and liabilities

To ensure clear and effective collaboration, it is crucial to clarify the roles and obligations of each party involved. This helps prevent misunderstandings and reduces the potential for conflict later on.

## 4.3 Survey methodologies

To ensure effective collaboration, a well-thought-out survey methodology is essential. While researchers have significant experience in these matters, the following considerations should be taken into account:

- Clearly define the survey objectives and scope to ensure mutual understanding.
- Highlight the survey team's offshore experience, certifications, and qualifications.
- Engage in detailed discussions to tailor survey methodologies, considering site-specific conditions and research goals. Seek feedback and expertise to refine the methodology, ensuring its alignment with industry standards and requirements.
- Provide access to a database of research vessels to facilitate selection and coordination.
- Share experience of the vessel operators and related operational considerations.
- Agree on appropriate equipment and resources needed to carry out the surveys effectively.
- Address any concerns regarding the methodology and engage in open and constructive dialogue to resolve any uncertainties, ensuring a shared consensus on the survey approaches.
- Document agreed-upon methodologies and modifications as a reference for future clarity.

## 4.4 Risk assessment

Researchers should provide developers with a comprehensive risk assessment covering their planned activities, considering both wind turbines and cable routes. This assessment serves as a valuable tool to outline the potential risks associated with specific research activities, highlighting high-risk areas that require heightened attention and appropriate mitigation measures.

To address risks effectively, a collaborative process is key, including proactive communication, regular risk assessments, and collective efforts to identify and mitigate potential risks. This approach allows researchers and industry to contribute their expertise, resulting in comprehensive risk assessments and strategies for safe and efficient research activities.

## 4.5 Health and safety alignment

By collaboratively reviewing and comparing their respective H&S documents, both parties can identify areas of commonality and differences. Industry can provide researchers with the site-specific protocols, guidelines, and safety measures of the OWF project, ensuring the protection of personnel, assets, and the environment.

Addressing any disparities or gaps in the existing H&S protocols and establishing a shared understanding of the safety measures required for offshore work is vital. Additionally, there may be variations in H&S protocols across different project phases and among sub-contractors. It, therefore, becomes essential to establish efficient communication channels and regularly revise protocols.

When establishing an overall agreed approach to working within an OWF, several H&S documents may be required to ensure a safe working environment. These documents typically include:

1. **Health and Safety Policy**: establishes the responsibilities, objectives, and procedures for maintaining a safe working environment.
2. **Risk Assessment**: identifies potential hazards, evaluates risks, and identifies control measures and safe working practices to mitigate the risks.
3. **Method Statement**: outlines the sequence of activities, equipment, and vessel.
4. **Emergency Response Plan**: outlines the actions to be taken in the event of an emergency situation, including contact information, evacuation routes, and procedures for alerting relevant authorities.

Researchers will have offshore training and experience, and thus will have defined their own Personal Protective Equipment (PPE) prerequisites. However, it remains crucial to verify the specific PPE requirements with the industry before accessing OWF structures. This precaution is essential to prevent any interruptions in the survey process.

## 4.6 Safety of navigation

Consideration of MGN 372 Amendment 1 (M+F) Safety of Navigation and compliance with MSN 1781 (M+F), and The Merchant Shipping Regulations (Safety of Navigation) Regulations 2020, is essential for all offshore operations.

### 4.7 Notice to Mariners

The research team is responsible for providing a Notice to Mariners (NtoM) two weeks in advance of operating offshore. These notices provide important navigational safety information to sea users. The NtoM should be provided to the UK Hydrographic Office (UKHO) or other relevant entities such as the MCA, the relevant Maritime Rescue Coordination Centre, Trinity House, the Kingfisher fortnightly Bulletin, relevant port authorities, local fishing contacts and the Royal Yachting Association, as required by the nature of the activities. These notices are disseminated through different channels such as corporate websites, the UKHO, the Kingfisher fortnightly Bulletin, local sailing clubs, and other relevant stakeholders.

Engaging in communication with the industry regarding the provision of NtoM is strongly advised, as they may possess an established system and be amenable to collaborating on this matter. Additionally, it is essential to reach a mutual agreement on the process of handling updates, as changes in circumstances may require an updated NtoM. This proactive communication approach guarantees the effective dissemination of pertinent navigational safety information to sea users, thereby mitigating potential risks and disruptions during research activities.

## 5 Continuous Improvement and Adaptive Strategies

### 5.1 Continuous engagement

Once an initial agreement for site access is in place, it is essential to focus on establishing continuous collaboration. Key principles to consider for the continuous building of strong working relationships include:

| | |
|---|---|
| Regular updates: | • Hold frequent meetings or progress updates to discuss challenges, facilitate transparency and keep all parties informed.<br>• Agree on the frequency and the preferred communication channels for updates. |
| Open communication: | • Involve stakeholders in decision-making, seek feedback, and address any concerns or issues promptly. |
| Feedback and input: | • Demonstrate willingness to collaborate, proactively seek feedback and adjust approaches accordingly. |
| Problem-solving: | • Encourage sharing of expertise to address any challenges during the research process. |
| Evaluate: | • Regularly evaluate methods, approaches, and communication to make necessary adjustments, and identify changes in stakeholder expectations. |
| Forward-thinking: | • Engage in a discussion about potential future applications or implementation of research findings.<br>• Stay informed about industry trends, advancements, and regulatory updates.<br>• Engaging in discussions on long-term research creates an opportunity to exchange ideas, align research objectives with industry needs and emerging priorities, and maximise the potential impact of research within the offshore wind sector. |
| Celebrate successes | • Recognise and celebrate achievements, milestones and success stories. |

Participating in relevant industry events, workshops, or working groups can provide opportunities for face-to-face interaction, knowledge sharing, and relationship building.

### 5.2 Conflict resolution

In collaborative working, conflicts may arise. Addressing such conflicts constructively is crucial to ensure the smooth progress of research projects. To overcome disagreements the following guidance should be followed:

- Clear and open communication: engage in actively listening and addressing concerns respectively.
- Compromise: find common ground and explore alternative solutions.
- Establishing clear mechanisms for raising concerns to address conflicts promptly.
- Expert opinion and mediation: in situations where disagreements persist, the involvement of an external expert may assist in facilitating resolution.

Disagreements can provide valuable learning opportunities, by reflecting on lessons learned and areas for improvement, future conflicts can be minimised.

### 5.3 Continuous improvement

To ensure the continuous improvement and success of offshore wind research, researchers and stakeholders are encouraged to evaluate and adapt their strategies based on feedback and lessons learned. The following recommendations outline key steps to achieve this:

- Actively seek feedback from stakeholders to inform research strategies and outcomes.
- Assess the effectiveness of strategies, methodologies, and data collection techniques.
- Encourage open dialogue for a culture of continuous improvement.
- Regularly evaluate research outcomes, reflecting on successes and challenges to refine research approaches and inform decision-making.
- Facilitate meetings, workshops, and conferences to share findings, and best practices, driving innovation and progress.
- Embrace adaptive management principles, regularly reviewing and updating strategies based on new information and changing circumstances.

## 6 Conclusion

These best practice guidelines provide a comprehensive framework for effective stakeholder communication and collaboration in the offshore wind sector, specifically developed to support researchers in gaining access to offshore wind sites.

There are many areas of continued uncertainty within the offshore wind sector including regulatory processes, environmental concerns, technological advancements and changing expectations. Ongoing research, collaboration, and innovation will be crucial in tackling these uncertainties and ensuring the sustainable development of offshore wind projects.

By adopting the principles outlined in this document, both parties can establish robust communication channels, foster mutual understanding, and navigate the process of accessing OWFs for research

purposes. The ultimate objective is to build trust, respect, and long-term collaboration, leading to significant contributions to offshore wind research and development. It is through effective communication, collaboration, and ongoing engagement that stakeholders can collectively address challenges, drive innovation, and achieve the national targets of the developing offshore wind sector.