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

Updated 2026

HMC
HOWELL MARINE
CONSULTING

Table of Contents

ECOWind is a co-designed partnership between the Natural Environment Research Council (NERC), the Crown Estate, the Crown Estate Scotland and Defra. Running for four-years (2022 – 2026), the Programme seeks to address critical gaps in understanding how large-scale expansion of UK offshore wind infrastructure affects marine ecosystems. To support site access at offshore wind farm sites for research purposes, the ECOWind champions team led a comprehensive process to understand the current and future requirements for site access in the UK. These guidelines are an output of this collaborative process.

Reference

ECOWind, 2026. Access to Offshore Wind Farm Sites for Research: Updated Best Practice Guidelines. ECOWind Programme.

Authorship

Kimberley Lloyd, Henk van Rein and Dickon Howell (Howell Marine Consulting).

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

Supportive quotes

These guidelines have received endorsement from the following organisations and initiatives:

Mandy King, Offshore Wind Evidence and Change Programme Manager at the Crown Estate said:

"I'm delighted to have been part of the development of these guidelines. Effective collaboration between experts from science, policy, and industry will be crucial to meeting net zero's challenges and opportunities and this initiative demonstrates the value of collaboration between industry and academia. Thanks to Howell Marine Consulting, the ECOWind champions, for pulling these together and I encourage all to follow and feedback comments to the champions."

Brian McFarlane, Offshore Wind Industry Council Group Chair said:

"These Best Practice Guidelines are a positive step in enabling collaboration between researchers and offshore wind farm developers/operators when access to offshore wind farms is requested for research purposes. The steps outlined support good communication and most importantly safety within offshore windfarms. OWIC has supported the development of these and endorse their use for all future collaborations."

This acknowledgement emphasises the credibility of these guidelines, establishing a foundation for widespread adoption and application.

1 Introduction

1.1 What are these Guidelines for?

These guidelines were originally published in 2024 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 the 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.

Two years on from their initial publication, multiple research projects have attempted to access OWF across a range of project phases, technologies and developer contexts. These experiences have highlighted both examples of effective collaboration and a number of recurring barriers (Section □). By refining the guidance based on experience, this update aims to strengthen practical usability, address common barriers, and support a more consistent, proportionate and practical approach to research access.

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

UK ambitions for offshore wind are high, with the Clean Power 2030 Action Plan targeting up to 50 GW of installed capacity by 2030, including 5 GW from floating wind.[2] Looking beyond 2030, the Climate Change Committee has identified a need for up to 140 GW of offshore wind by 2050 to meet the requirements identified by the Climate Change Committee.[3] The Crown Estate estimates that 20–30 GW of new seabed rights in England and Wales will need to be brought to market by 2030 for delivery out to 2040.[4]

1.3 What are the benefits of developers working in partnership with researchers?

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.

---

[1] https://ecowind.uk/
[2] https://assets.publishing.service.gov.uk/media/677bc80399c93b7286a396d6/clean-power-2030-action-plan-main-report.pdf
[3] https://www.theccc.org.uk/wp-content/uploads/2020/12/Sector-summary-Electricity-generation.pdf
[4] https://www.datocms-assets.com/136653/1742378325-future-offshore-wind-2024.pdf

Potential benefits of inter-stakeholder collaboration include:

Knowledge and insights:	Collaboration and engagement between developers and researchers can deliver cutting edge scientific data and valuable knowledge to strengthen strategic planning and support robust, evidence-based decision-making across site selection, design and assessment processes.
Technological advancements:	Working with research institutions enables developers to engage with emerging technologies, methodologies, and monitoring approaches to improve efficiency and data quality.
Addressing knowledge gaps:	Targeted research helps to fill critical evidence gaps that often constrain consenting and assessment. By reducing uncertainty, developers can streamline applications, respond more effectively to regulatory requirements, and minimise the need for precautionary assumptions.
Cost savings:	New data and evidence can remove uncertainty enabling effective mitigation of project risks and potentially achieve cost savings by avoiding consenting delays, and reducing the need for redesigns or duplicated effort.
Enhanced reputation:	Greater collaboration with researchers demonstrates commitment to transparency, environmental responsibility, and best practice. This can build trust and confidence among regulators, statutory consultees, investors, and Non-Governmental Organisations, while also strengthening the developer's credibility as a responsible and evidence-led operator.

2 Legal and operational context

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 the following sections.

OWF sites are not universally closed areas, and in many cases, researchers may be able to lawfully operate within OWF arrays provided they remain outside any legally established safety zones, comply with relevant navigation, marine licensing and seabed consent requirements, and do not interact with offshore energy infrastructure or associated restricted assets (Figure 1). However, even where formal permission is not legally required, early coordination with the operator and/or marine coordination team is strongly advised to support safe deconfliction, operational awareness and effective planning. All vessels operating offshore must comply with the safety of navigation regulations (**Section 3.8**).

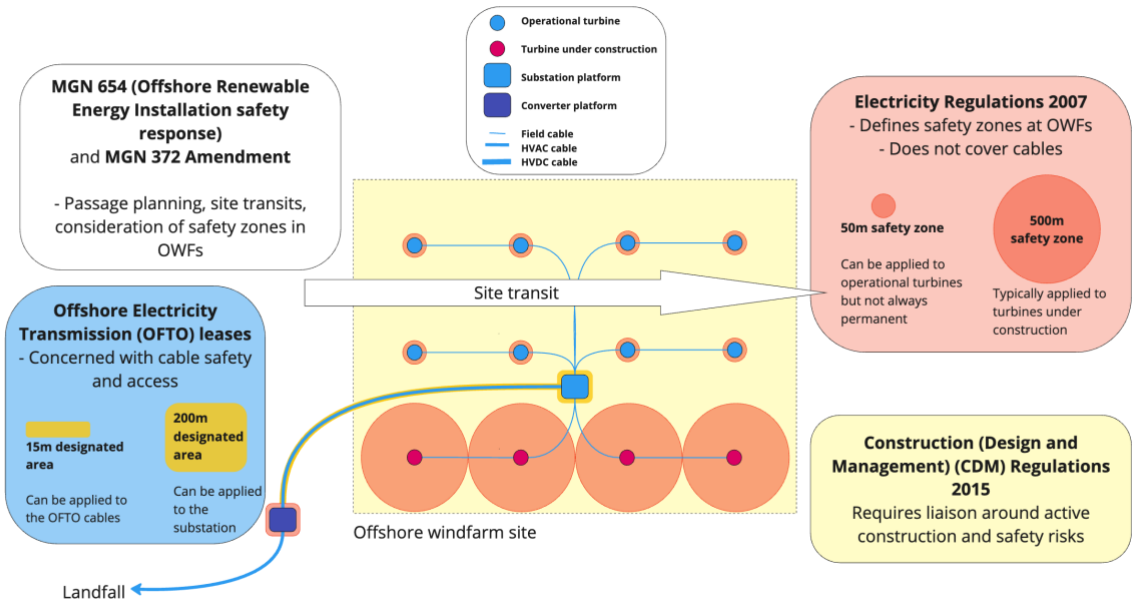

Figure 1. General summary of important navigational advice and regulations regarding access for researchers to OWF sites.

2.2 MCA 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. This guidance forms a critical reference point for both developers and mariners and should be consulted directly to ensure a full understanding of expectations. Readers are strongly encouraged to review these guidance notes in full, as they provide essential detail on how principles should be interpreted and applied in practice.

It is important to note that while a vessel is in "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 may 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.

Safety zones are not automatically or universally in place across all OWF sites and, in practice, are rarely granted. However, early and regular communication is strongly advised to clarify safety zones and to understand site-specific considerations.

OWF projects follow the Construction (Design and Management) Regulations 2015, which apply during the construction of turbines and associated infrastructure as well as during the operation and maintenance phase work where major maintenance is required, and associated marine logistics and vessel interfaces.

Where construction activity is ongoing, some restrictions on third-party research access may be necessary. However, these should be applied in a proportionate and activity-specific manner, taking into account:

- The proximity of proposed research to active works;
- whether the activity may interfere with construction traffic, lifting operations or other site-critical tasks; and
- the duration, method and risk profile of the proposed survey.

Early and ongoing engagement between developers and researchers is essential to enable a shared understanding of health and safety risks. This includes transparent discussion of where access may be feasible, where risks may be unacceptably high, and where the need for proximity to turbines to address critical evidence gaps, can be accommodated where practicable.

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 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 Process for gaining site access

3.1 Initial Planning and engagement

The first step is to understand what research activity is already planned at OWF sites, as there may be opportunities to align or coordinate proposed work. This is also important because repeated or overlapping requests for access to the same site can lead developers or operators to disengage.

Initiate discussions and planning with OWF developers **at least 12 months in advance,** where possible, to allow sufficient time for coordination and preparation. Identify the correct person to contact regarding site access, usually the environmental lead or planning consent manager who can then liaise meetings with the OWF site manager and operations team. There may also be value in involving a coordinating or facilitating function, such as a third-party body (e.g. ECOWind/ECOFlow Champion team), to provide reassurance, support alignment and broker solutions.

Plan and resource communications for site access carefully, as site access coordination is resource-intensive and will require multiple exchanges across environmental, H&S and operational developer teams before access is granted.

Initial communication should be concise and clearly set out:

- **Team field experience:** A short summary of relevant offshore experience, including previous work in vessel-based survey work, and any required certifications (e.g. offshore safety training).
- **Research interests and objectives**: A clear statement of the research questions being addressed, the intended objectives and outputs (e.g. publications, datasets, tools).
- **Really clear proposed methodology for data collection**: Provide information including the survey methods and equipment, spatial extent, level of interaction with infrastructure, and vessel information (See Section 3.5).
- **The purpose and value of the research**: A succinct explanation of why the research matters—both in scientific terms and in relation to offshore wind (e.g. reducing consenting risk, improving monitoring approaches, informing mitigation).
- **Why the proposed site is suitable**: Clear reasoning as to why the specific offshore wind farm or area is required, including any unique characteristics (e.g. layout, seabed conditions, existing data) that make it suitable.
- **The likely benefits for the offshore wind sector**: Description of how the outcomes could support developers, regulators, or the wider sector (e.g. cost efficiencies, improved evidence base, reduced uncertainty in impact assessment).
- **The expected duration, frequency and timing of site visits**: Practical details on how often access is required, for how long, and during which periods (including any seasonal constraints), to support planning and operational coordination.

Be prepared for engagement to be an iterative and resource-intensive process. Academics will need to communicate with multiple individuals across different developer teams, often revisiting and

repeating key information as proposals move through internal review stages. Developer organisations are typically structured across distinct functions (e.g. operations, HSE, marine coordination), and these teams may operate in silos, bringing different perspectives, priorities, and feedback.

The key roles include:

Environmental Consent Manager:	Typically, the initial key point of contact for research proposals, they will assess how the proposed work aligns with consenting requirements and where it may provide value to the developer. They often act as the primary interface, coordinating and facilitating engagement with the relevant site-specific roles below.
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 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 developer needs and expectations. The offshore wind industry typically plans operations **at least 12 months** in advance. Researchers should prepare a clear and concise information pack including overview and objectives, site access requirements, method statements, H&S information and logistics and coordination (Section 3.1).
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 the impact for offshore wind consenting. 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. Communicate the practical benefits of your research, such as improved performance or risk mitigation.
Proportionality:	Be prepared to tailor engagement, documentation and approval processes to meet stakeholder and developer requirements. Researchers should seek clarity during early engagement on whether developers require the use of specific templates, formats or management systems, e.g. developer-specific RAMS, induction processes, PPE standards, to avoid duplication of effort or the need to

	re-submit information later in the process. Requirements for coordination, documentation and approval should be proportionate to the nature, duration, location and risk profile of the proposed activity. Early agreement on documentation expectations can help streamline reviews, improve consistency and reduce delays to site access approvals.
Tailor communication:	Understand the industry's language and adapt communication in a way that resonates with their objectives or strategic initiatives. 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. Avoid using language that may impose high-risk activity such as 'scraping, 'grabbers,' or 'suction sampling.' 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 and staff experience. Demonstrate live findings and results.
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. 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.
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 3.2).** Maintain trust among stakeholders by respecting confidentiality agreements and any sensitive information shared during the collaboration (**Section 3.4**).
Liability	Clarify the roles and obligations of each party involved (**Section 3.7)**
Innovation and creativity:	Encourage a culture of experimentation and continuous learning, encouraging new approaches and ideas.

3.2 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 including 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 (MDE). 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. However, researchers should be aware that there can be a delay between data submission, processing and publication on the MDE. Researchers are therefore encouraged to engage with The Crown Estate MDE team at mde@thecrownestate.co.uk, to understand what data may already be

available and what can be made available for the research project. The Crown Estate and Crown Estate Scotland can clearly communicate specific data requirements to developers and facilitate a resolution to ensuring that data is available for research where possible.

Early engagement with offshore wind developers on data is needed to understand what data may already be available, or likely available in the time of the project, enabling both researchers and developers to consider and accommodate any needs they may have through data-sharing agreements.

3.3 Reporting research findings

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

- Identify and agree an appropriate project point of contact to coordinate research communications and reporting activities.
- 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. Researchers should agree early on whether developers require pre-publication review periods and the scope of any review.

3.4 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.

3.5 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 the experience of the vessel operators and related operational considerations.
- Agree on the 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.

3.6 Health & Safety

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 method statement (RAMS):** 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, including contact information, evacuation routes, and procedures for alerting relevant authorities.

Researchers should provide developers with a clear, task-specific and site-specific risk assessment covering all planned activities within the OWF. In practice, challenges can arise where health and safety documentation remains at a high-level or conceptual stage, rather than setting out well-defined, site-specific plans. Site teams typically require greater clarity on the precise locations (e.g. specific turbines), the timing of activities, and how proposed works will interact with existing infrastructure and operations.

The purpose of the RAMS is to identify the risks associated with the proposed activity and to demonstrate how these will be managed through appropriate control measures, competent personnel, suitable equipment, and safe systems of work.

Researchers will typically already have defined requirements for personal protective equipment (PPE), vessel operations, and offshore competence, and these should be recognised where they meet appropriate standards. However, it remains essential to confirm any site-specific PPE, induction, communications, or access requirements with the developer in advance, particularly where work is proposed near turbines or other operational assets.

Given that the H&S review and engagement process can be resource-intensive, early engagement is strongly recommended, ideally commencing no later than **six months in advance of the proposed activities.**

3.7 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.

3.8 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.

3.9 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.

4 Continuous Improvement and Adaptive Strategies

4.1 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. • 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. • Stay informed about industry trends, advancements, and regulatory updates. • 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.

4.2 Conflict resolution

In collaborative working, conflicts may arise. Addressing such conflicts constructively is crucial to ensuring 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.

4.3 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.

5 Case studies & lessons learned

This section presents a series of real-world case studies and insights drawn from interviews with researchers, OWF operators, and other stakeholders who have been directly involved in coordinating research access to OWF sites. These experiences have generated a valuable evidence base of what works well, the recurring challenges encountered, and the operational considerations that shape successful access arrangements.

5.1 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 one year prior to fieldwork. 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. Importantly, once initial protocols and working arrangements were established, this facilitated repeat access over multiple years, demonstrating the value of early investment in relationship-building and procedural clarity.

Case study 2: eSWEETS

The research project, “Enabling Sustainable Wind Energy Expansion in Seasonally Stratified Seas,” led by Professor Jonathon Sharples, University of Liverpool, gained access to the Kincardine OWF. Engagement commenced 12 months in advance and involved regular and constructive engagement with multiple stakeholders across the developer organisation. While the process was resource-intensive, it enabled both site access and access to data, such as temperature measurements along export cables, illustrating the value of relationship building.

Case study 3: 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 2.

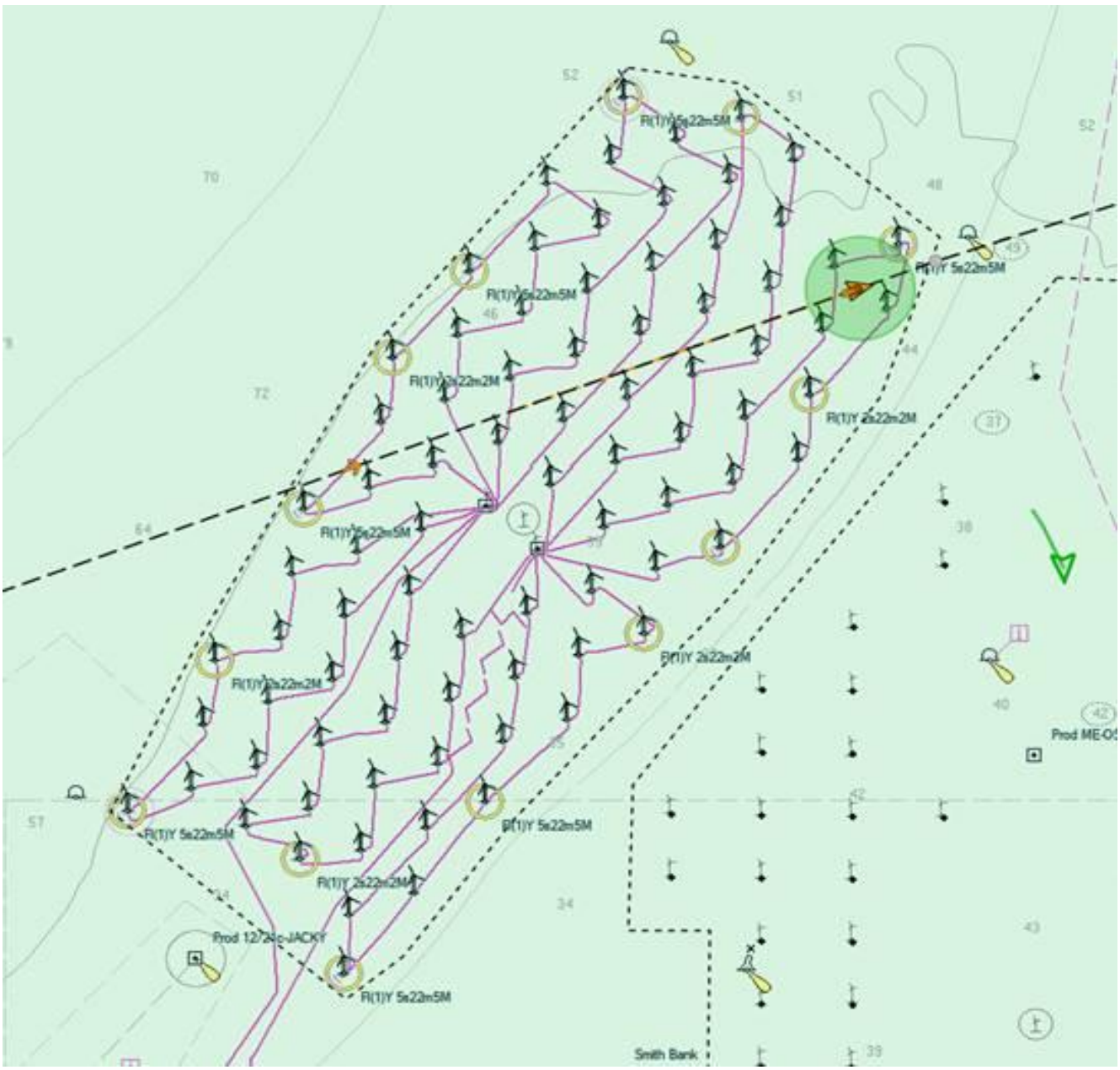

Figure 2. Map of the Beatrice OWF in the Moray Firth, north of Scotland. The dotted line shows the passage of the Uncrewed Surface Vehicle (XOCEAN, yellow arrow, in green circle) as it passed through the wind farm on 21 August 2021.

5.2 Case studies: Engagement challenges and constraints

Experience across multiple projects indicates that initial engagement does not always result in immediate access and may, in some cases, be declined. Site access requests are often considered alongside competing operational priorities, and may be subject to delays, periods of limited response, or the need for re-engagement. Changes in personnel can also require engagement processes to be re-established.

The preparation and review of RAMS and associated H&S documentation can be complex and time-consuming on both sides, highlighting how important it is to agree in early discussions. In some instances, additional safety measures may be requested, such as vessel specifications or equipment requirements, which can have implications for cost, feasibility, and liability. These considerations may require careful discussion to reach a proportionate and workable approach that balances safety requirements with research objectives.

A consistent lesson is the importance of early, transparent engagement with both environmental and health and safety teams, to identify potential constraints at an early stage and allow sufficient time to explore feasible solutions.

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.

Experience from the case studies and wider stakeholder engagement indicates that successful site access is underpinned by early planning and a realistic understanding of the level of effort required. As a general principle, engagement should commence at least 12 months in advance of any proposed survey activity, recognising the need to align with project programmes, operational constraints, and internal review processes.

Securing access typically requires a sustained investment of time and resource, including ongoing coordination across multiple developer teams (e.g. environmental consents, health and safety, and marine operations). It also involves the preparation and iterative refinement of key H&S documentation, including RAMS. Agreement of health and safety requirements and RAMS processes should commence as early as possible, as these are often a key source of delay, and should be initiated no later than six months prior to fieldwork.

While this process can be resource-intensive, there is clear evidence that early and constructive engagement can deliver longer-term benefits. Establishing trusted working relationships can lead to more streamlined processes for repeat access, including the potential for multi-year agreements and, in some cases, opportunities for data sharing. Over time, as familiarity and confidence develop on both sides, the process of coordinating access can become more efficient and predictable.

By adopting the principles outlined in this document, and taking a patient, flexible, and solutions-oriented approach - underpinned by clear communication, both parties can build trust and long-term collaboration.