Offshore Wind Evidence + Change Programme

Offshore Wind Evidence + Change Programme

Programme Steering Group Meeting

Monday 18th September 2023

Agenda

Timings	Events	Speakers
10:00-10:15	**Welcome from Chair**	• William Apps, The Crown Estate
10:15 – 11:00	**Session 1: Overcoming risks**	• Dickon Howell, Howell Marine Consulting • Katie-Jo Luxton, Director Global Conservation, RSPB
11:00 – 11:35	**Session 2: Impact – ensuring outcomes**	• William Apps, Head of Marine Development, The Crown Estate • Kate Potter, OWIC Pathways to Growth • Elspeth McIntyre, Senior Geospatial Consultant, Atkins
11:35 – 11:45	**Email/coffee break**	
11:45 – 13:05	**Session 2 Continued: Impact workshop**	• Facilitated workshop with attendees split into breakout groups
13:05 – 14:05	**Lunch and networking**	• Provided by The Crown Estate
14:05 – 14:50	**Policy updates**	• Offshore wind update from Trevor Raggatt, DESNZ • Offshore wind policy update from Ruth Stubbles, Defra • MSPri update from Chloe Meacher, Joint Head of Marine Spatial Prioritisation Programme, Defra
14:50 – 15:05	**Email/coffee break**	
15:05 – 16:05	**OWEC updates**	• Mandy King, OWEC Programme Manager, The Crown Estate • Tobias Verfuss, Associate Director, Carbon Trust • Lise Ruffino, Senior Marine Industries Ornithologist, JNCC • Alex Banks, Principal Specialist, Natural England • Kat Route-Stephens, Offshore Wind Strategic Compensation Programme Manager, Offshore Wind Industry Council
16:05 – 16:15	**Chairs closing remarks**	• William Apps, The Crown Estate

Safety Moment

Benj Sykes, Chair of the Offshore Wind Industry Council's Pathways to Growth programme

Offshore Wind Evidence + Change Programme

Session 1 : Overcoming Risks

Dickon Howell, Howell Marine Consulting

Katie-Jo Luxton, Director Global Conservation, RSPB

ECOWind

Working together to overcome risks of research programmes at Offshore Wind Farms:

A site access example led by ECOWind

OWEC Programme Steering Group meeting 18 September 2023

Professor Dickon Howell and Dr Henk van Rein

Natural Environment Research Council
Offshore Wind Evidence + Change Programme
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ECOWind

ECOWind's research aims to understand how OWFs affect ecosystems, and the species and habitats that make them…

by better understanding this to influence the development of policies to better manage our marine environment…

…while also tackling climate change

Research Programme Risks

Benefits/impacts of environmental research not realised

Projects research outputs delayed - missed opportunity for impact in a fast-paced government / industry delivery landscape (e.g. strategic compensation not legally possible)

Decision makers cannot use evidence in cumulative effect assessment or policy making because it is either not relevant or uncertainty is too great

Industry deployment of offshore wind, or requirement for evidence, moves faster than the science programme, reducing the window for impact

Science findings are not adequately communicated to key audiences to achieve desired impact

Site access to offshore infrastructure cannot be obtained by researchers

Data access and sharing issues

Highly Pathogenic Avian Influenza (HPAI) virus effects on wild birds under investigation

Weather, equipment, staffing challenges

ECOWind

Co-developed by

offshore wind researchers and developers

THE CROWN ESTATE

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Maritime and Coastguard Agency

ECOWind website:
https://ecowind.uk/site-access-guidelines/

Coming soon to the Marine Data Exchange

Overcoming site access risks

…by working together

- **Site access critical** for all near-turbine evidence collection across environmental research programmes

- Delivery of **British Energy Security Strategy** targets (50GW by 2030), as well as **Net Zero ambitions** (125GW by 2050)

- Evidence needed to support the de-risking of offshore wind planning and consenting, and delivery of Strategic Compensation and Marine Net Gain

Site access questions

Perceived benefits/impacts of environmental research

Priority areas of interest for research

Site access questions on Construction and Operational phases of OWFs

Proximity that various types of survey equipment can be safely deployed in relation to turbines

How often and **how long** researchers would like to deploy survey equipment

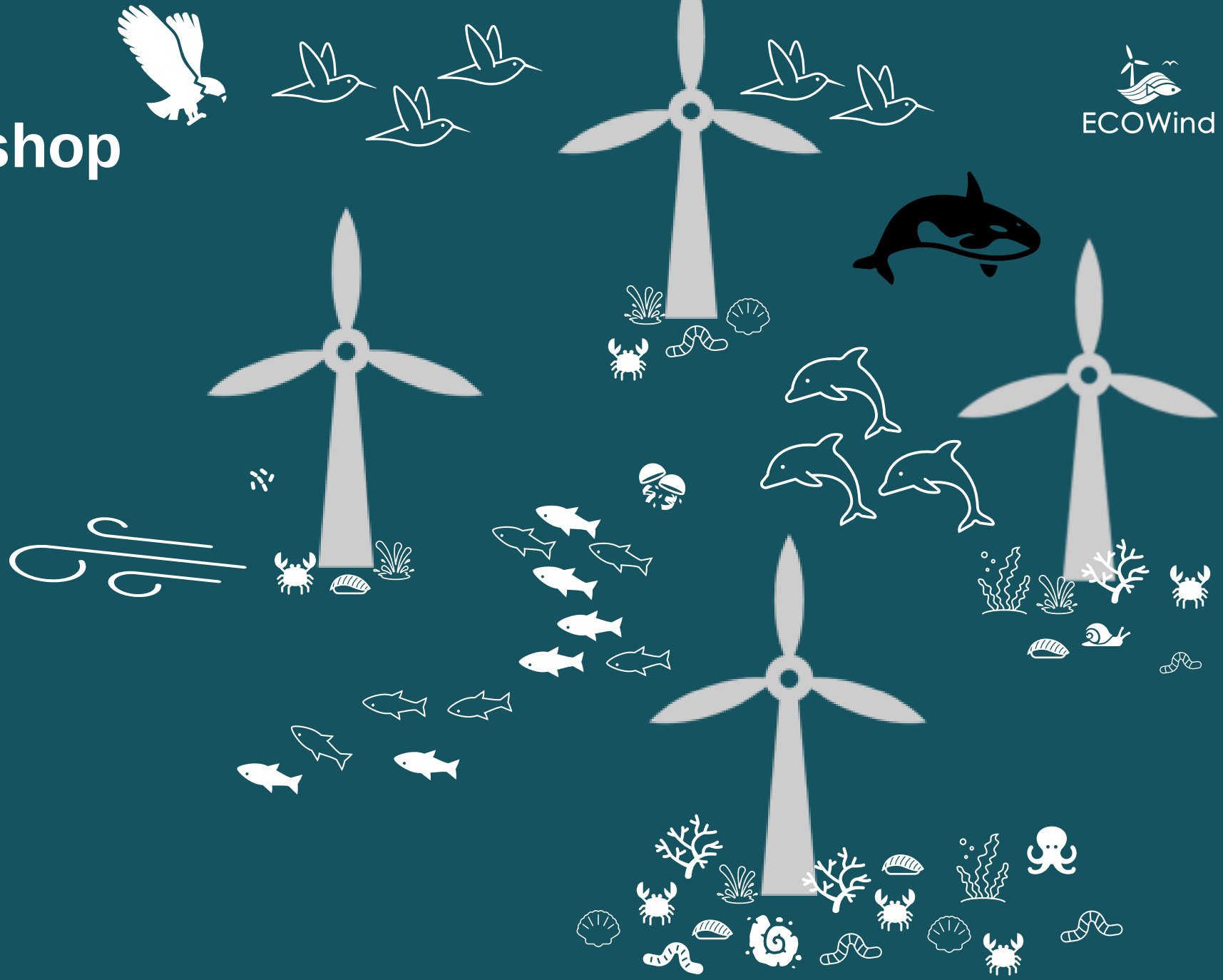
Perceived **risk and level of risk** posed by deployment of various types of survey equipment

Which survey and sampling guidelines/procedures/standard are followed

Previous experience of offshore research in collaboration with offshore industries

Preferred ways of working

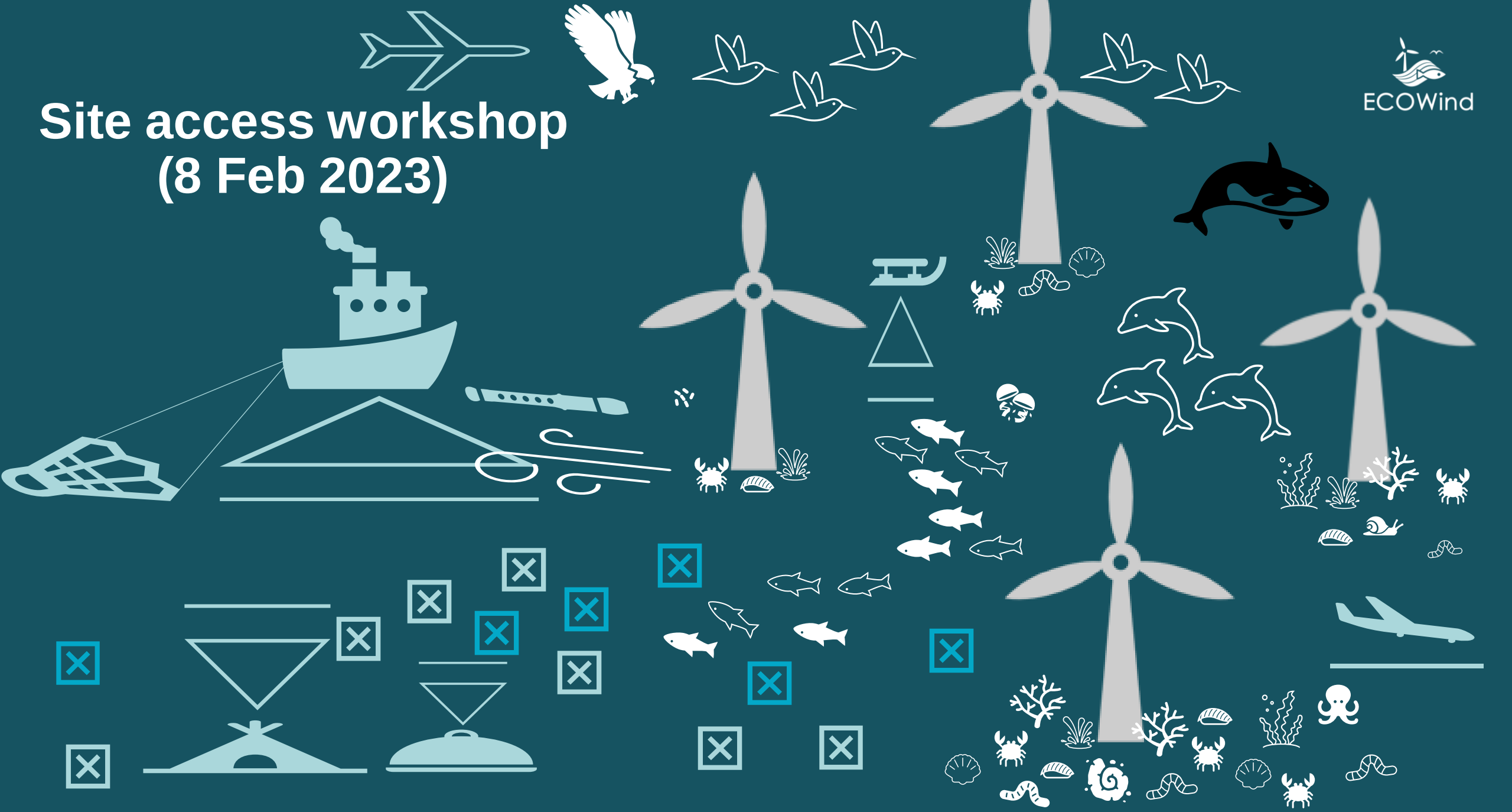
Site access workshop (8 Feb 2023)



ECOWind

Site access workshop (8 Feb 2023)

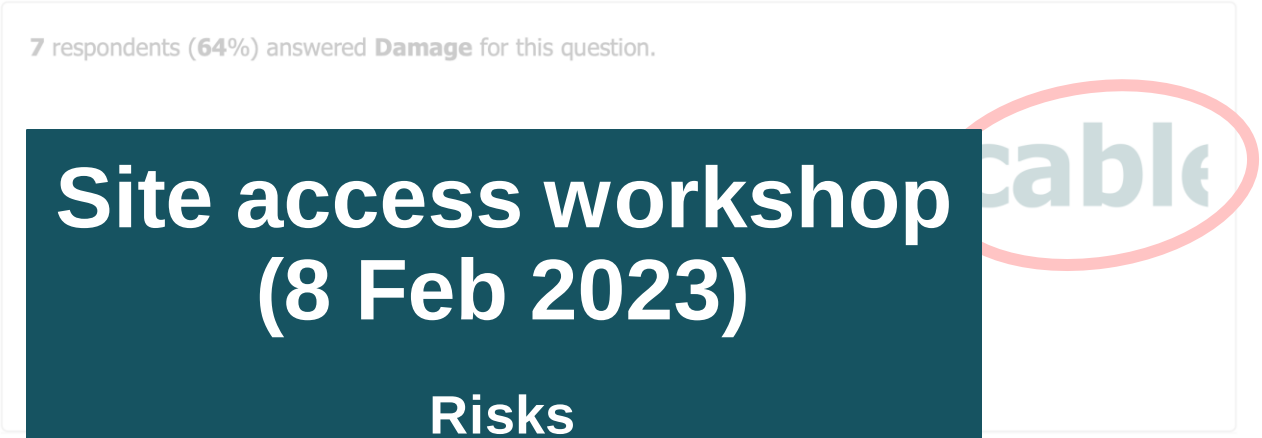
ECOWind

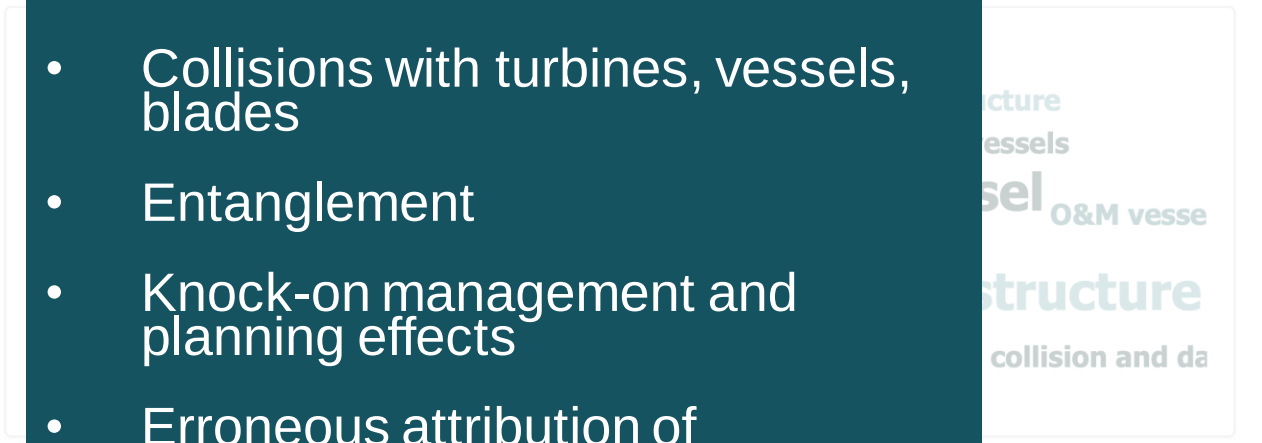


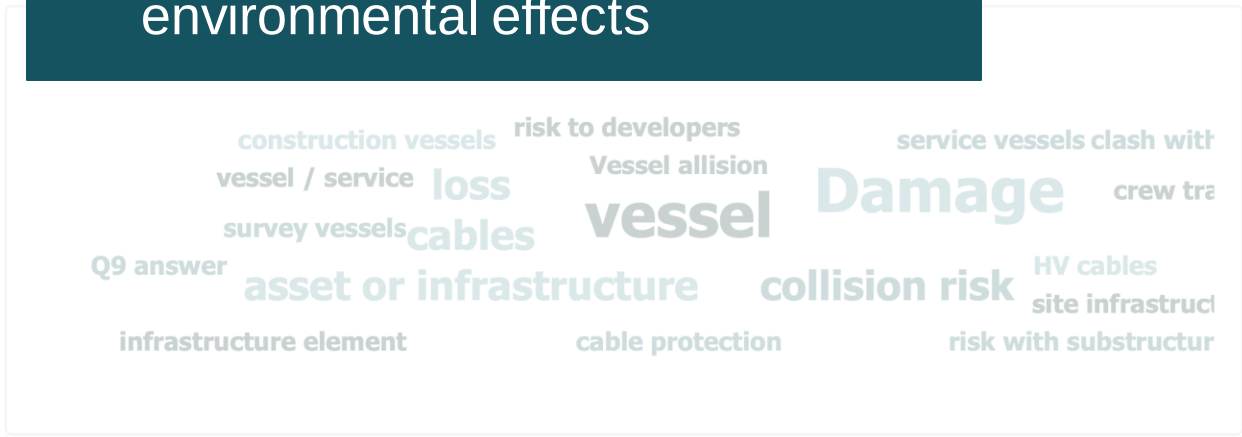
Site access workshop (8 Feb 2023)

Risks

- Collisions with turbines, vessels, blades
- Entanglement
- Knock-on management and planning effects
- Erroneous attribution of environmental effects







Outline of site access guidelines

Introduction

- Purpose of guidelines
- Benefits of collaboration

Regulatory Framework

- Guidance and regulations
- Safety zones
- Site access scenarios
- Site-specific adaptability

Stakeholder Engagement

- Roles & arranging specific contacts
- Strategies for initial engagement
- Case studies

Collaborative Planning

- Risks, responsibilities and liabilities
- Survey methodologies
- H&S
- NtoM

Continuous Improvement and adaptive strategies

- Evaluate & lessons learnt
- Conflict resolution
- Ongoing communication
- Continuous improvement

ECOWind

Co-developed by

offshore wind researchers and developers

THE CROWN ESTATE | Crown Estate Scotland, Oighreachd a' Chrùin Alba | Maritime and Coastguard Agency

ECOWind website:
https://ecowind.uk/site-access-guidelines/

Coming soon to the Marine Data Exchange

Share guidelines across sectors and **seek feedback, additional case studies** and **acknowledgement** in the interests of **promoting healthy, fruitful, long-lasting relationships** in the offshore environment

Feedback by end of October

ECOWind

www.ECOWind.uk | Champions@ECOWind.uk

Professor Dickon Howell
Director at
Howell Marine Consulting

Dr Henk van Rein
Research Programme Manager at
Howell Marine Consulting

Crown Estate Scotland
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UKRI Natural Environment Research Council
Offshore Wind Evidence + Change Programme
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HMC HOWELL MARINE CONSULTING
MINDFULLY WIRED COMMUNICATIONS

Update on Avian Influenza and its relevance for offshore wind

Katie-Jo Luxton
Director of Global Conservation
RSPB

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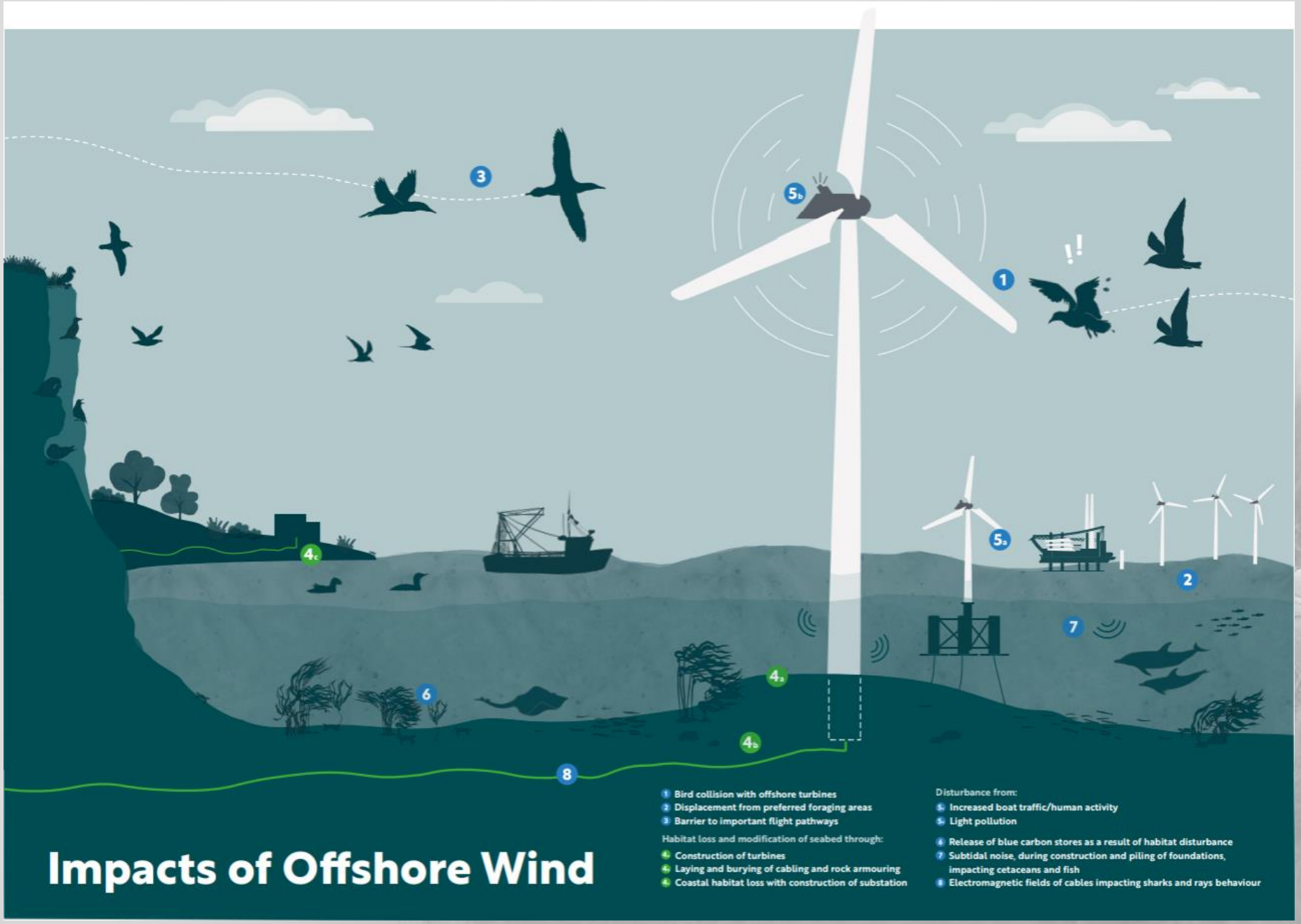
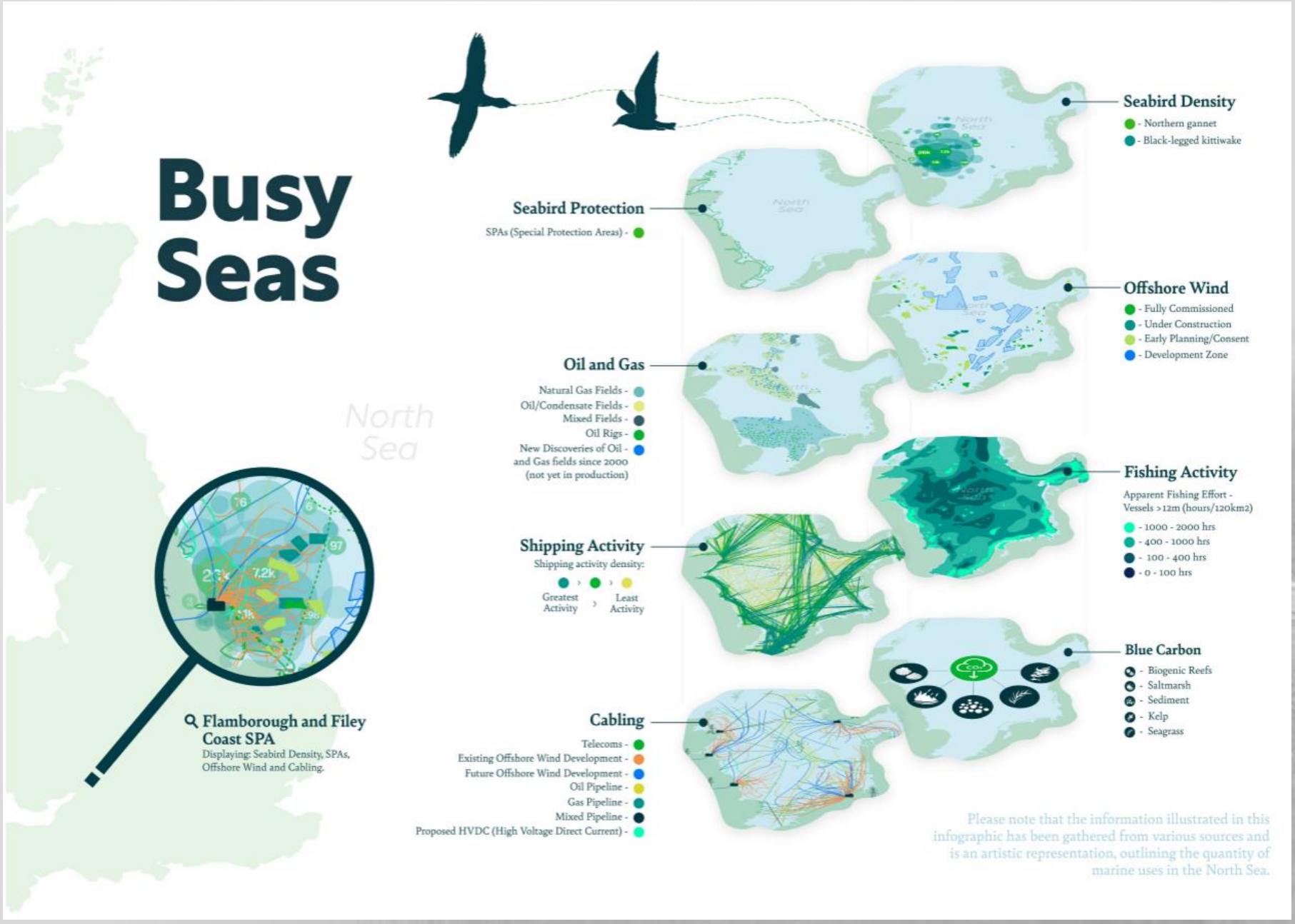


Source: RSPB (2022) *Powering Healthy Seas: Accelerating Nature Positive Offshore Wind*



Source: RSPB (2022) *Powering Healthy Seas: Accelerating Nature Positive Offshore Wind*

Impacts on seabirds in 2022

>22,000 seabirds reported dead to NatureScot

5000 Gannets dead at Grassholm and another 3000 at Troup Head

7% of world population of Great Skuas dead in Scotland

>25% of breeding Roseate Terns dead on Coquet Island

> 20% of Sandwich Tern population in Northern Europe lost

21 out of 25 regularly breeding seabird species in the UK have tested positive

- Arctic Tern
- Black Headed Gull
- Common Gull
- Common Tern
- Cormorant
- Fulmar
- Gannet
- Great Black Backed Gull
- Great Skua
- Guillemot
- Herring Gull
- Kittiwake
- Lesser Black Backed Gull
- Little Tern
- Manx Shearwater
- Mediterranean Gull
- Puffin
- Razorbill
- Roseate Tern
- Sandwich Tern
- Shag

Surveying on Grassholm this year has revealed a 52% decline in the Gannet population, bringing numbers down to a low not seen since 1969.

Impacts on seabirds in 2023

30,000 Black-headed Gulls dead across UK

Significant impacts on Kittiwakes and Guillemots

Over 700 Kittiwakes dead at RSPB Fowlsheugh alone

Significant impacts on Sandwich and Arctic Terns in England

Over 5000 dead across RSPB reserves, vast majority seabirds

11,000 Kittiwakes dead in Norway

Key takeaways in 2023

- The virus is still very much with us; this is the third summer that we are seeing highly pathogenic avian flu impacting our seabirds
- It has behaved very differently this breeding season, with outbreaks first appearing in inland gull colonies in England in March and no cases in Scotland until late June
- The worst hit species have been Black-headed Gulls, Kittiwakes, Guillemots, and several tern species
- This year we are dealing with a different clade that is particularly well-suited to gulls
- Changes this breeding season point to the disease's unpredictability
- Evidence out this year on recovery in Gannets

Research led by Dr Jude Lane, RSPB, shows that black eye in Gannets indicates infection and recovery from HPAI

OWEC supported monitoring work 2023

- 2023 survey programme went very well, aided by good weather
- Counts of selected seabird species to assess impact of 2021-22 HPAI outbreak
- Species targeted: Gannet, Great Skua, Arctic Skua, Kittiwake, Guillemot, large gulls and terns
- Counts were led by RSPB in partnership with SNCBs, government departments, BTO and others
- Currently collating the data
  - Information so far suggests that Great Skuas have suffered severe declines across their range
  - Picture is more mixed for cliff-nesters with some decreases and some increases
- Analysis still underway; report planned for end of December

Relevance for offshore wind

- Colony counts can help us understand the **reliability of survey data used in consenting** (i.e. have bird numbers changed since surveys were conducted) to enable a more accurate baseline population to be used in impact assessment.

- Colony counts will help to understand the **conservation status of SPA populations** (favourable/unfavourable etc) which is important to inform Habitat Regulations Assessment (a key part of the consenting process).

- Can also help assess the robustness of populations to additional mortality from developments. This will be important, for example, in **population viability analysis (PVA),** which is an essential part of the consenting process.

- Colony counts will help with **apportioning of impacts to SPA populations.**

Thank you and Acknowledgements

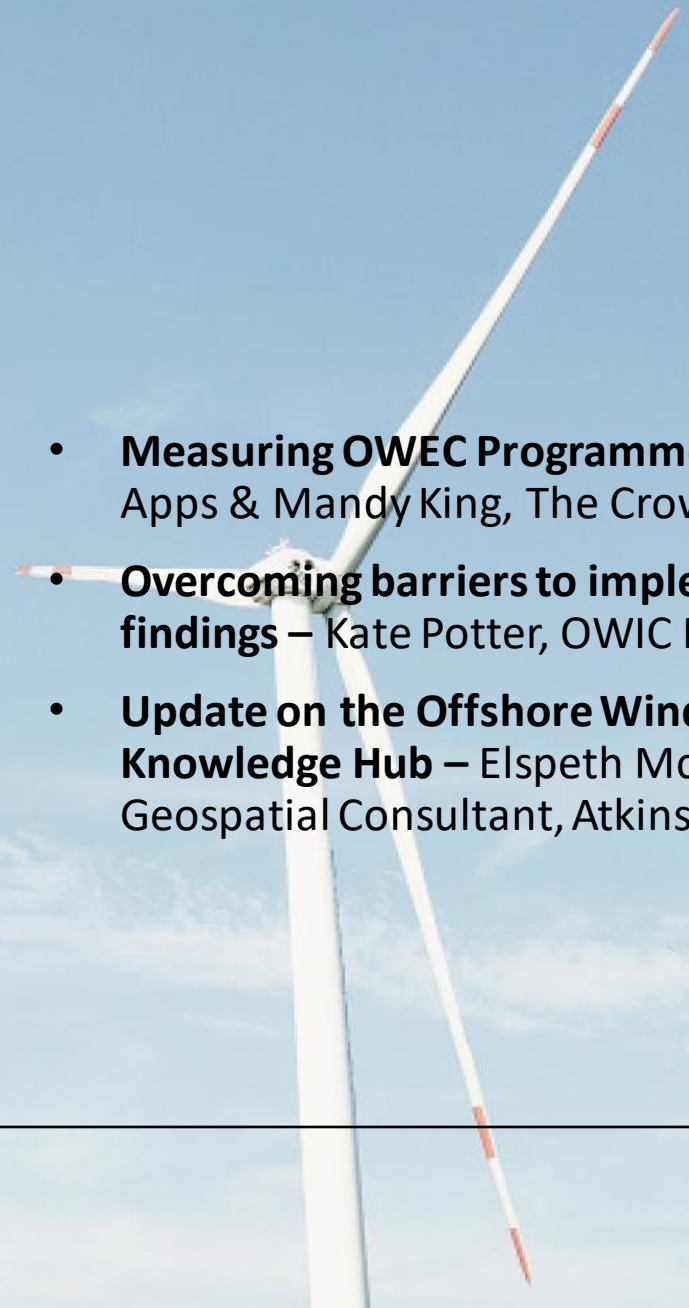
The ScotWind developers of the East and North East Plan areas, The Crown Estate (through the Offshore Wind Evidence and Change Programme), Scottish Government (via the ScotMer programme), Natural England, Department of Agriculture, Environment and Rural Affairs, and Natural Resources Wales.

We are also grateful for additional support provided by BTO, NatureScot, Natural Resources Wales, Natural England, JNCC, National Trust for Scotland, National Trust, Scottish Wildlife Trust, Sea Mammal Research Unit, SOTEAG, Sarah Wanless, Mike Harris, and The Seabird Group. Our thanks go to all the SMP contributors who continue to submit annual data, many of them doing so as volunteers.

Offshore Wind Evidence + Change Programme

Session 2: Impact : Ensuring Outcomes

- **Measuring OWEC Programme impacts –** William Apps & Mandy King, The Crown Estate
- **Overcoming barriers to implementing research findings –** Kate Potter, OWIC Pathways to Growth
- **Update on the Offshore Wind Evidence and Knowledge Hub –** Elspeth McIntyre, Senior Geospatial Consultant, Atkins



Outcomes and Impact Tracking

Outcomes:

The conditions created which have the potential to enable and affect real-world change and value (social, environmental and/or economic). For example, recommendations made that could be used in future policy.

Impact:

The evidenced real-word change and value (social, environmental and/or economic) created by the outputs and outcomes. For example, national policy that has been influenced or changed by the project's outputs and outcomes.

POSEIDON

Full name: **Planning Offshore Wind Strategic Environmental Impact Decisions**

Lead Organisation: **Natural England**

Intended outcome:
Improve environmental baseline, to identify and address any evidence gaps. Updated and improved spatial models to inform the basis of planning tools.

Intended impact:
Clear understanding of the environmental risks and opportunities for offshore wind developments, leading to OSW farms located in areas of reduced environmental risk.

OWEKH

Full name: **Offshore Wind Evidence and Knowledge Hub**

Lead Organisation: **The Crown Estate**

Intended outcome:
To provide a platform that brings together relevant and standardised information to support digital EIAs and proportionate assessment.

Intended impact:
Change in practices in favour of a more consistent and / or proportionate assessment in project level assessment.

PrePARED

Full name: **Predators and Prey Around Renewable Energy Developments**

Lead Organisation: **Scottish Government Marine Directorate**

Intended outcome:
Address critical knowledge gaps that are current barriers to sustainable offshore wind development by concurrently studying predator (seabird and marine mammal) and prey (fish) distribution and behaviour in and around offshore wind farms, providing insight into cumulative effects from large scale development on key species.

Intended impact:
New evidence to inform offshore wind farm policy, planning and licencing which are required to help meet the government's renewable energy targets and subsequently reach net zero emissions.

Strategic Targets for Net Gain

Full name: Strategic Targets for Net Gain

Lead Organisation: **Seabed User and Developer Group (SUDG)**

Intended outcome:
A robust set of recommended strategic targets for MNG, which have strong consensus and agreement from industry, regulators, and conservation bodies. The targets provide a building block for Defra's ongoing work through the Offshore Wind Enabling Actions Programme (OWEAP) to develop policy for MNG and its implementation.

Intended impact:
Influence policy, enhance or improve marine environment and energy security (pulled from September 2022 report). many of the recommendations made by the Task & Finish Group as part of this project were adopted in the Defra consultation on the principles of marine net gain (MNG) last year. Also, the report from the project has been widely accessed on the Marine Data Exchange.

Remote tracking of seabirds

Full name: **Remote tracking of seabirds**

Lead Organisation: **RSPB**

Intended outcome:
To determine the feasibility of using the Motus network to address key seabird knowledge gaps, and if feasible collect data to address current uncertainties, aid impact assessments and reduce consenting risk for offshore wind development.

Intended impact:
The key impact of this project is providing proof of concept, which could prove invaluable to the offshore renewables industry globally. If feasible, the wide-scale deployment of the Motus system across multiple North Sea SPAs will leave an important legacy, enabling further research and monitoring in the UK to address uncertainties and inform future development.

Pathways to Growth (P2G)

Core barriers to delivering impact from research

OWEC PSG Meeting - 18 September 2023

Delivering Impact from research - definition

The UK Research and Innovation refers to the Economic and Social Research Council in its definition of research impact:

"…shifting understanding and advancing scientific method, theory and application…"

"…influencing the development of policy, practice or services, shaping legislation and changing behaviour…"

"reframing debates"

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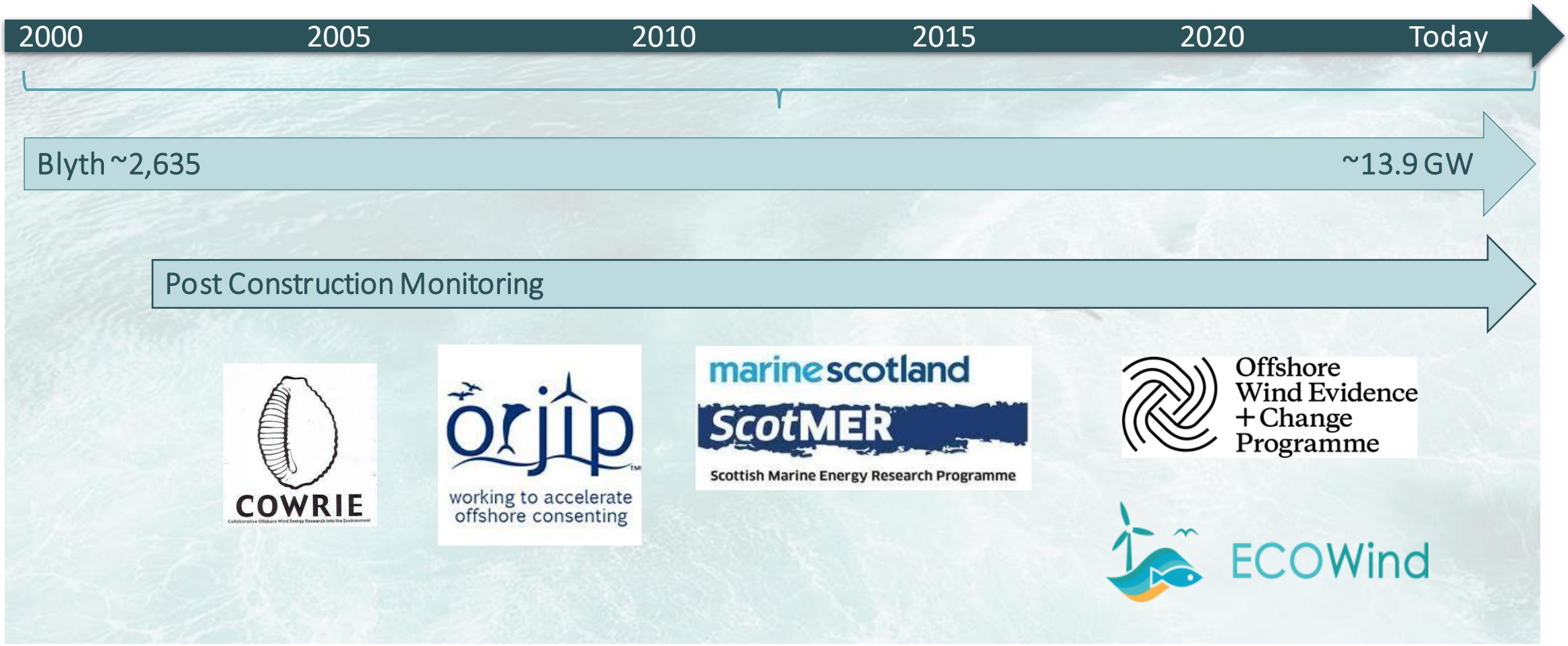
Delivering impact from consenting research has been ongoing for 15 years.



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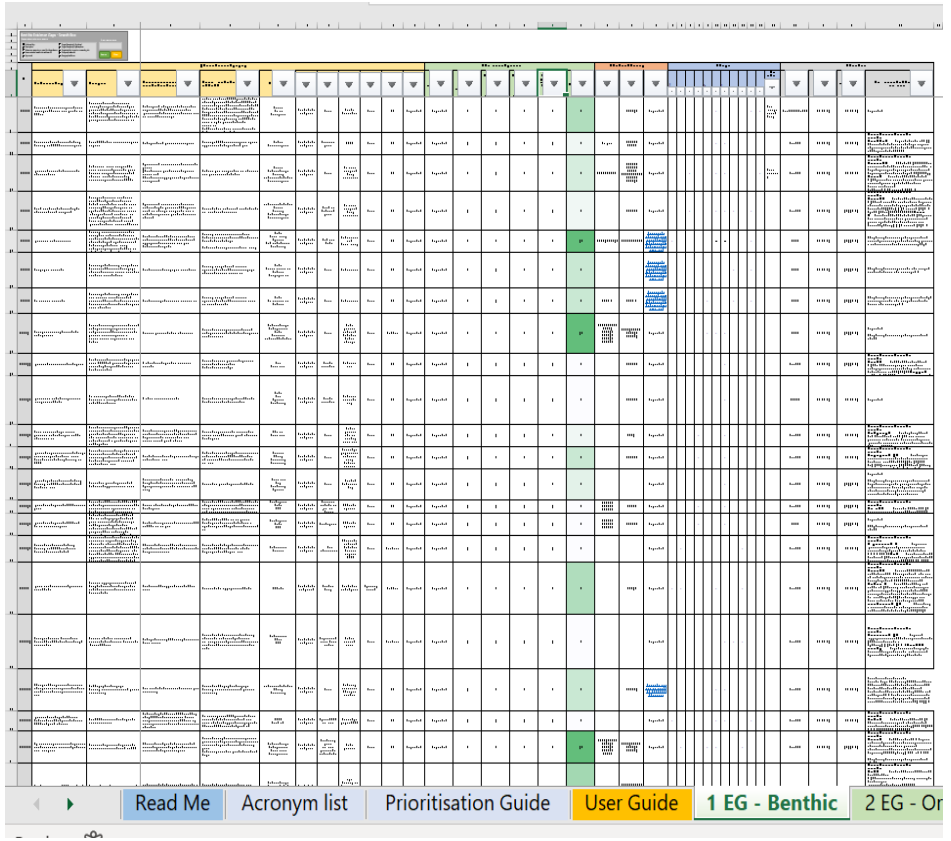
There remains a number of evidence gaps and ongoing research

The Offshore Wind Environmental Evidence Register contains 442 data evidence gaps and 235 entries relating to research that is planned/underway.

- Which evidence gaps can be closed in time to deliver the 2030 offshore wind ambition?
  - Agree and align on the most critical consenting issues to deliver impact.
  - Target and coordinate research to have the greatest impact on critical issues.



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The Key Barriers to Impact

Volume of evidence gaps and of research/work.

No UK wide agreement on **targeting** research to close evidence gaps

Agreeing what will be **accepted** by consenting decision makers prior to commencing research.

Consistency in agreed guidance, advice and decision making

Accessing data and research from multiple locations

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Consistent Advice and Decisions at a UK, Country or Organisational Level

Advice can vary between projects and across the UK.

- Taking decisions taken about research outcomes at an organisational level.
- Communicating and sharing organisational positions across organisations.
- Ensuring understanding and organisational position is communicated when staff move on.
- Coordinating across the UK to identify synergies between countries and clarifying where differences are.

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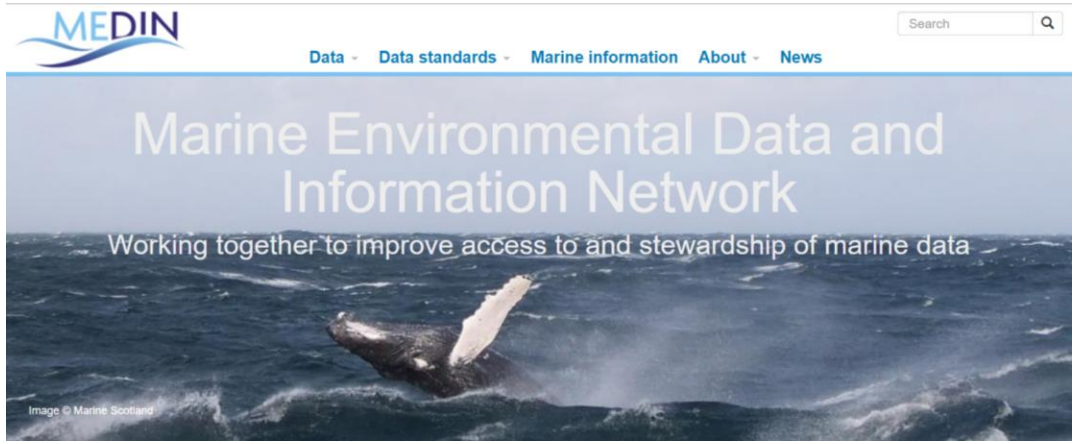
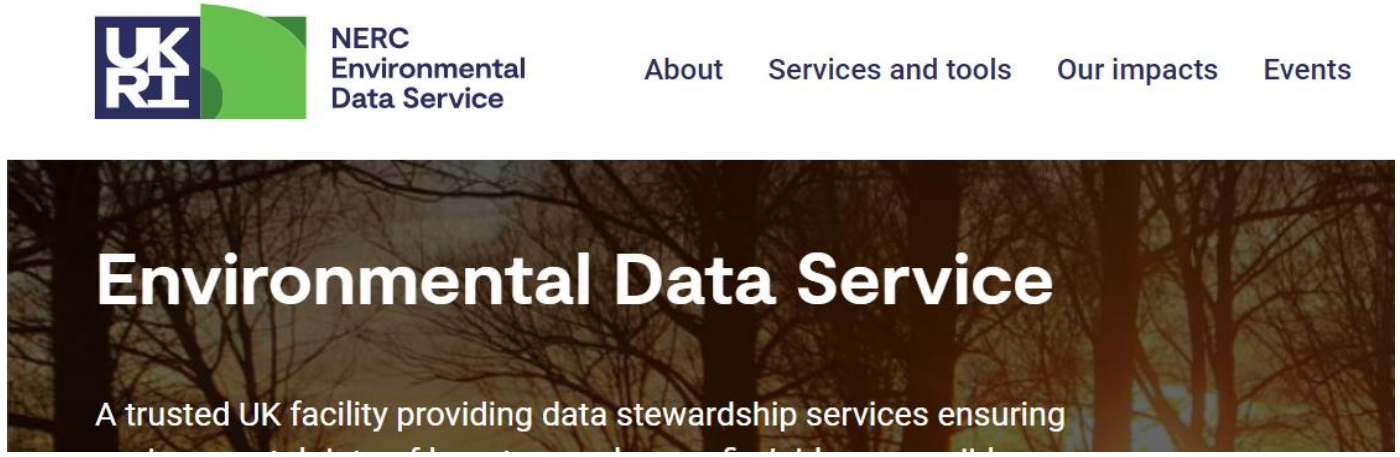
Accessible data and research

Finding accepted data and evidence and how it has been used can take huge amounts of time.

- Navigating multiple data and research portals.
- Identifying the most up-to-date and ‘accepted’ evidence.
- Clarifying how research and data be used together to support impact assessment.





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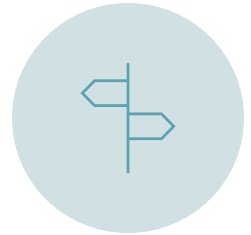
Overcoming the Barriers

AGREEING KEY IMPACT AREAS

TARGETING RESEARCH

CONSISTENT DECISIONS

AGREED PRACTICAL GUIDANCE



SIGNPOSTING ACCEPTED DATA AND RESEARCH

OffshoreWind IndustryCouncil

OWEKH

Offshore Wind Evidence + Knowledge Hub

OWEC Programme Steering Group

September 2023

THE CROWN ESTATE

Offshore Wind Evidence + Change Programme

AtkinsRéalis

IEMA

Department for Environment Food & Rural Affairs

Offshore Wind Industry Council

What is OWEKH?

Success relies on buy-in and adoption from users and stakeholders

OWEKH is made up of two main components:

- The Community of Practice
- The Online Portal

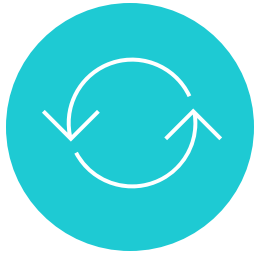
The creation of OWEKH will bring multiple benefits to the sector:

Collaboration and consensus amongst OSW groups

Knowledge transfer & sharing of best practice

Centralisation of people and information to drive faster access and understanding

Better and faster decision-making that is proportionate and transparent



Drive change and move towards a more digital approach

The Community of Practice (CoP)

Split into four groups:

- **Technical Topic Groups (TTG)**
- **An Oversight Group (OG)**
- **Industry Champions**
- **OSW Stakeholders Community (OSC)**
- Collectively create/curate guidance & evidence for OWEKH
- Terms of Reference defines the roles and responsibilities of each group – **this group to help shape those**

Oversight Group (OG)

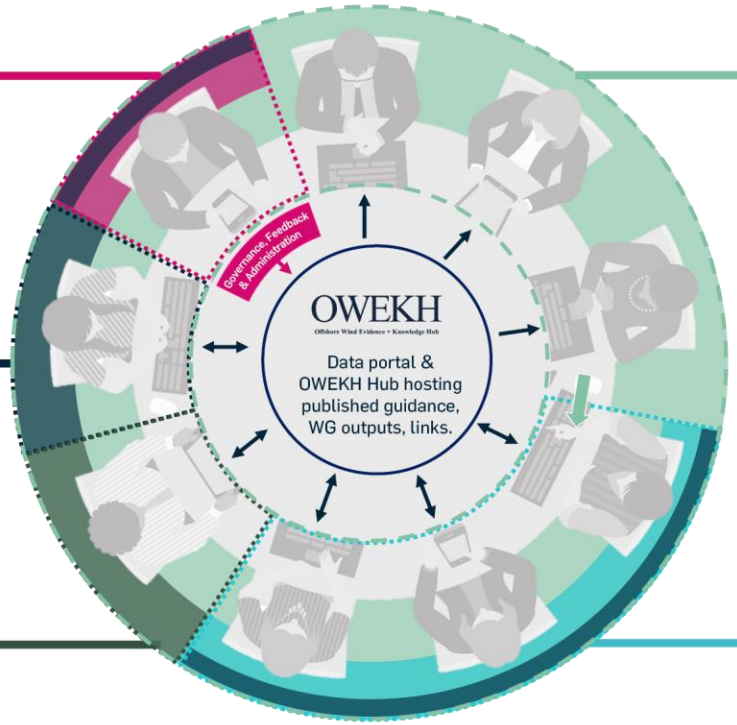
Senior representatives from organisations with a key role in UK OSW development, from all administrations. Providing governance and direction to OWEKH; to support TTGs and provide hub content governance and administration.

CoP Secretariat

Administrative support to TTGs, OG and Industry Champions to ensure the timely and effective organisation of OWEKH and the CoP.

OWEKH Champions

Individuals who will champion and promote OWEKH and its CoP.



OSW Stakeholder Community (OSC)

All other stakeholders working across the OSW assessment sector, including regulators, consent managers, advisors, experts, researchers and assessment practitioners across different technical areas. This is an ever-changing group of people with no formal role within the governance of the CoP. These are end-users of the Hub, that may use the Hub in their business roles.

Technical Topic Groups (TTG)

Multiple TTGs, each focusing on an individual specialist topic area, that will collaborate to identify, curate and create effective practical guidance and information sources that can be widely accepted and used in the assessment and consenting of OSW developments.

Timeline

Summer 2022

Steering group and design team come on board

Early Autumn 2022

Initial stakeholder engagement

Autumn 2022

Development begins

September 2023

First IA TTG Workshop

November 2023

Platform Launch

Continued development of hub and Community

TTGs Identified

1. ~~IA coordination / approaches to assessment, changes to policy (LURB etc)~~
2. Benthic ecology
3. Fish / shellfish ecology
4. Marine mammals
5. Ornithology
6. Seascape, landscape and visual impact
7. Historic environment / cultural heritage
8. Climate change / Blue carbon / carbon assessment
9. Compensation – *DEFRA leading on HRA processes under energy security bill*
10. Seabed / sediment / coastal processes / metocean – *Potential higher priority as can inform other groups*
11. Shipping and Navigation
12. Social impact and benefit - socio-economics, human health, social value, community benefit
13. Cable routeing (onshore) / substations
14. Biodiversity benefit / BNG / MNG – *potentially higher priority – lots of activity*
15. Aviation and Radar
16. Commercial Fisheries
17. UXO – *NEW (DEFRA working on)*
18. *Offshore Cable routing – NEW (DEFRA working on)*

Priority 1

Priority 2

Development Roadmap

Planned Before Initial Release

- Subscribe to research/survey update notifications
- Edit or delete notifications from account
- Sort search results
- Ability to flag and remove poor quality content

Post Initial Release (2023)

- Edit uploaded active research/survey
- Submit interest in research/survey
- Get in touch with a TTG
- Digital TTG guidance approval process
- TTG guidance revision process
- Increased filtering functionality e.g. by project, by location, by document type

Post Initial Release (2024)

- Integrate OWEER into OWEKH
- Save searched items
- Mapping functionality
- Increased search and filtering functionality
- Integrate Poseidon into OWEKH

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Session 2: Continued: Impact Workshop

Facilitated workshop with attendees split into breakout groups.

Aim of Impact Workshop Breakout Sessions:

To identify best practice in delivering and communicating impactful research and to look for examples of what has and hasn't worked in PSG member organisations, including for non-OWEC projects.

Offshore Wind Evidence + Change Programme

Policy Updates

- Offshore wind policy update from Trevor Raggatt, Head of Offshore Wind – Environment and Planning, Department for Energy Security and Net Zero (DESNZ)
- Offshore wind policy update from Ruth Stubbles, OWEAP Programme Director Co-Lead, Department for Environment, Food and Rural Affairs (Defra)
- Chloe Meacher, Head of Marine Spatial Prioritisation Programme Co-Lead, Defra

Department for Environment Food & Rural Affairs

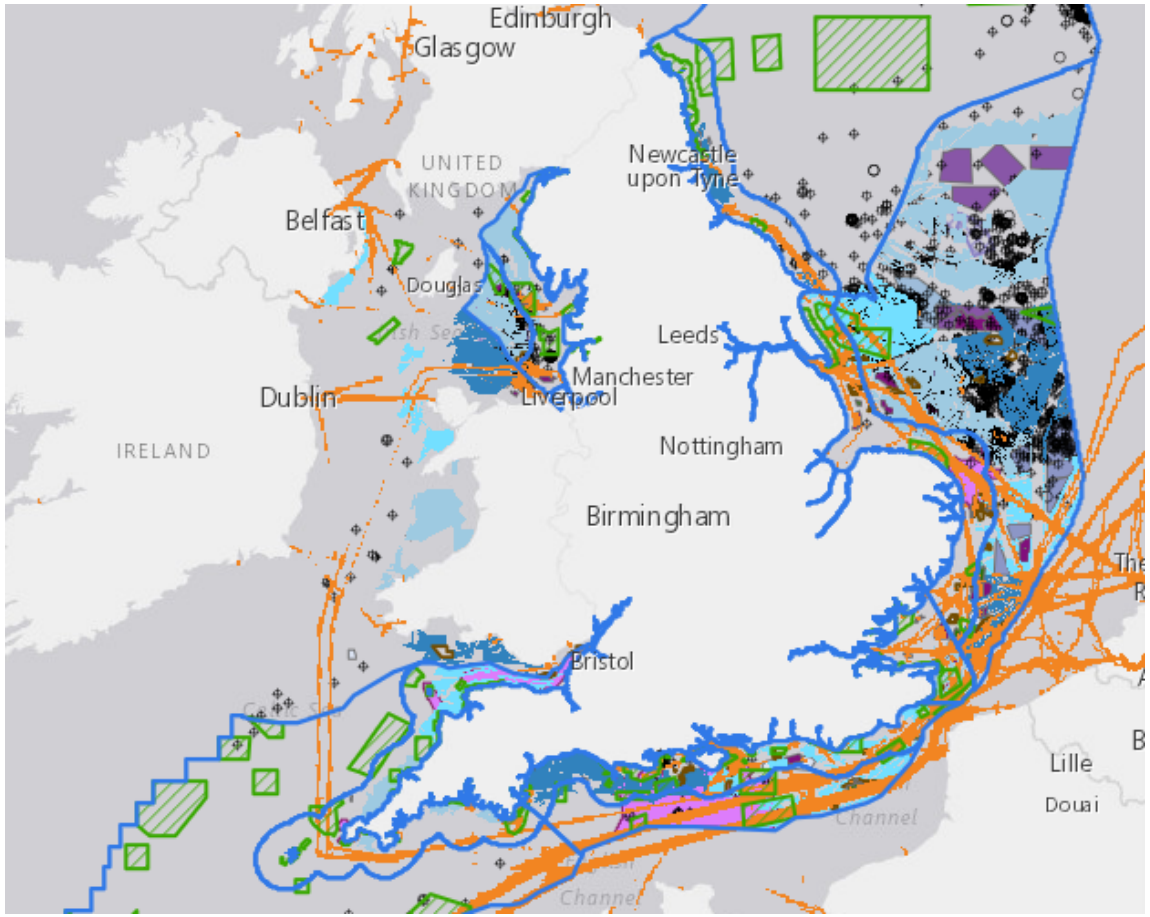
Marine Spatial Prioritisation (MSPri)

Chloe Meacher – Defra Marine Spatial Prioritisation Programme Co-Lead

OWEC

18th September 2023

Marine spatial prioritisation is needed to help with the increasing and conflicting demands on our seas



Example activities include: OSW potential (blue), tidal (purple), aggregate extraction (brown), oil and gas wells (black dots), high density navigation (orange), marine conservation zones (green)

- Historically, marine development wasn't at the same scale as on land.
- Now there is more demand for space from multiple sectors (eg renewables, tourism; shipping) which is causing spatial challenges.
- While we have a robust marine planning system in place, it is designed to balance competing needs of sea users, rather than establish an agreed hierarchy of priorities.
- Strategic management is needed to avoid conflict and promote sustainable development, while considering the economy, society and environment.
- The marine environment is a crucial ecosystem and plays a vital role supporting the delivery of several ambitious government targets, including on the climate and biodiversity crises as well as energy security.
- The spatial squeeze will put delivery of one or more of these targets at risk.
- Action is needed to optimise the use of our marine environment; maximise colocation and prioritise how the sea are used.

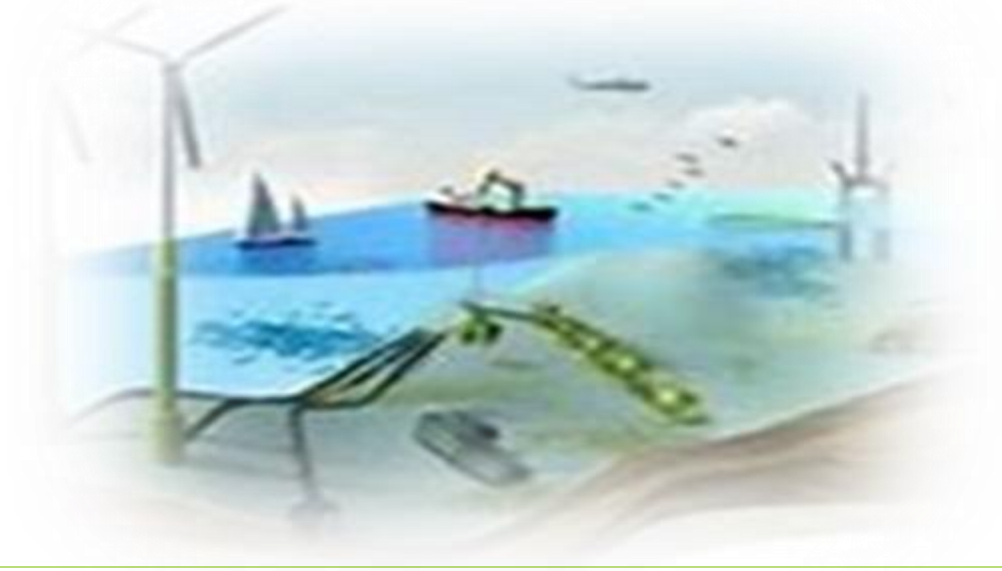
Our ecosystem services are important and worth at least £211bn

Each year the UK blue economy contributes:

- Offshore fossil fuels: ~£18.2 billion in 2019
- Recreation: ~£6.8 billion in 2017
- Marine fisheries: ~£667 million in 2020 (and a further £480m in aquaculture)
- Offshore renewables: ~£3.8 billion annual turnover (ONS)
- Aggregate extraction: ~£20 million in 2018
- Shipping: 95% UK trade
- Subsea telecoms: cables carry $1.9 trillion per day in (cross border) Foreign Exchange trades (23% of the world's total Foreign Exchange trading).

Marine and coastal ecosystems also contribute:

- Total marine natural capital assets are worth at least £211 billion
- Carbon sequestration: ~£57 billion in 2019
- Waste remediation: ~£680 million in 2019
- Amenity value of sea views (aesthetics): ~£100 million in 2016



Cross-government action is needed to solve the spatial challenges in our seas

Programme aims

Defra is leading a cross-government programme on Marine Spatial Prioritisation which aims to:

a. **optimise use of the marine space**; including adopting a more strategic approach to identifying appropriate sites for specific marine uses or infrastructure e.g. offshore wind.

b. **maximise coexistence between different sea users;** such as how best to design cabling and/or offshore wind to minimise impacts on other sectors.

c. **prioritise how the seas are used where coexistence isn't possible;** including the potential consequences, impact and mitigations required.

Programme outputs

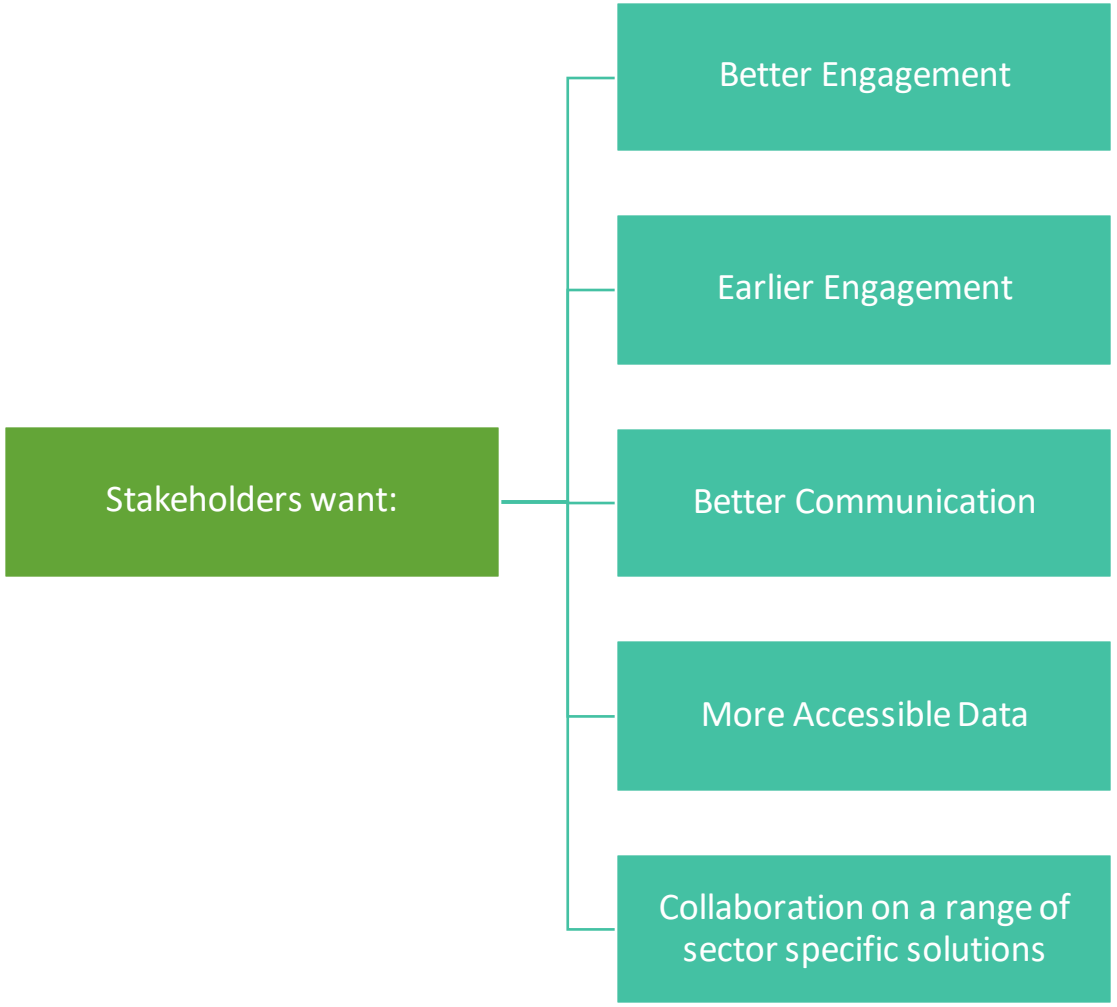
The programme outputs will be a suite of recommendations to Ministers on:

1. **How to use the seas:** using modelling and prioritisation scenarios to produce illustrative maps to demonstrate the spatial squeeze to Ministers, the implications and trade-offs, and enable Ministers to make those prioritisation decisions.

2. **The Government's position on interventions.** Extent that Govt intervenes in order to achieve its priorities for the marine environment vs extent to which managing co-location and prioritisation decisions are left to existing practices, regulators, seabed managers and sectors.

3. **Implementation**. Identifying the policy levers needed to achieve Govt priorities in the marine environment, and how the levers may need to change over time.

Our stakeholders across different sectors have some clear asks on how to improve co-location



Offshore Wind Evidence + Change Programme

OWEC Updates

- Mandy King, OWEC Programme Manager, The Crown Estate
- Tobias Verfuss, Associate Director, Carbon Trust
- Lise Ruffino, Senior Marine Industries Ornithologist, JNCC
- Alex Banks, Principal Specialist, Natural England
- Kat Route-Stephens, Offshore Wind Strategic Compensation Programme Manager, Offshore Wind Industry Council

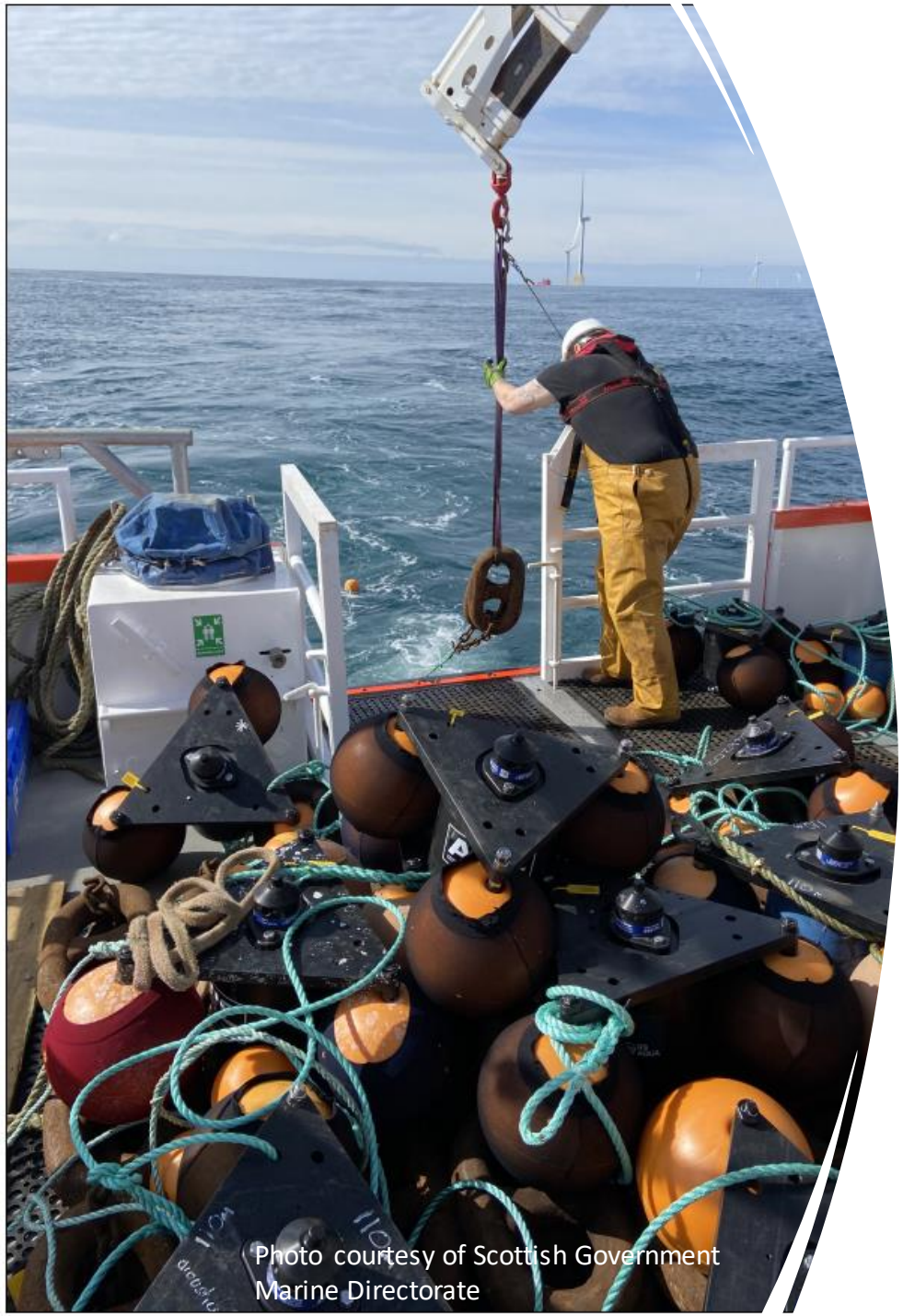


Photo courtesy of Scottish Government Marine Directorate

Where are we now...

- 3 major project calls since programme launch Dec. 2020
- 24 live projects, 11 completed
- PrePARED, POSEIDON and ECOWind projects continuing marine surveys – benthic, fish, seabirds and marine mammals
- Continued engagement, support and challenge from strong 27-member Programme Steering Group, incl. partners Defra and DESNZ


Photo courtesy of Scottish Government Marine Directorate

What next?

- 4th major project call open – deadline for outline bids 13 October
- Joint Annual Impact Meeting (AIM) with ECOWind 22/23 Nov.
- 4 new projects commence from last year's project call (£9m investment)

Photo courtesy of Scottish Government Marine Directorate

Major new projects

1. Prevalence of Seabird Species and Collision Events in Offshore Wind Farms (PrediCtOr) **Carbon Trust (ORJIP)**
2. Procellariiform Behaviour & Demographics (ProcBe) **JNCC**
3. Reducing Seabird Collisions Using Evidence (ReSCUE) **Natural England**
4. Strategic Compensation Pilots for Offshore Wind **Offshore Wind Industry Council (OWIC)**

Inspiring industry and public body collaboration!

Offshore Wind Evidence + Change Programme

PrediCtOr

Prevalence of Seabird Species and Collision Events in Offshore Windfarms

SEPTEMBER 2023

WAARDEN BURG Ecology
BTO British Trust for Ornithology
CARBON TRUST
orjip working to accelerate offshore consenting
THE CROWN ESTATE
Ørsted
RWE
CARBON TRUST
marinescotland
Rijkswaterstaat
equinor
SCOTTISHPOWER RENEWABLES
TotalEnergies

Mission Statement

*"PrediCtOr sets out to develop a **coordinated approach** for reducing uncertainty surrounding bird collision risk - and therefore reducing consenting risk - for offshore windfarm developments."*

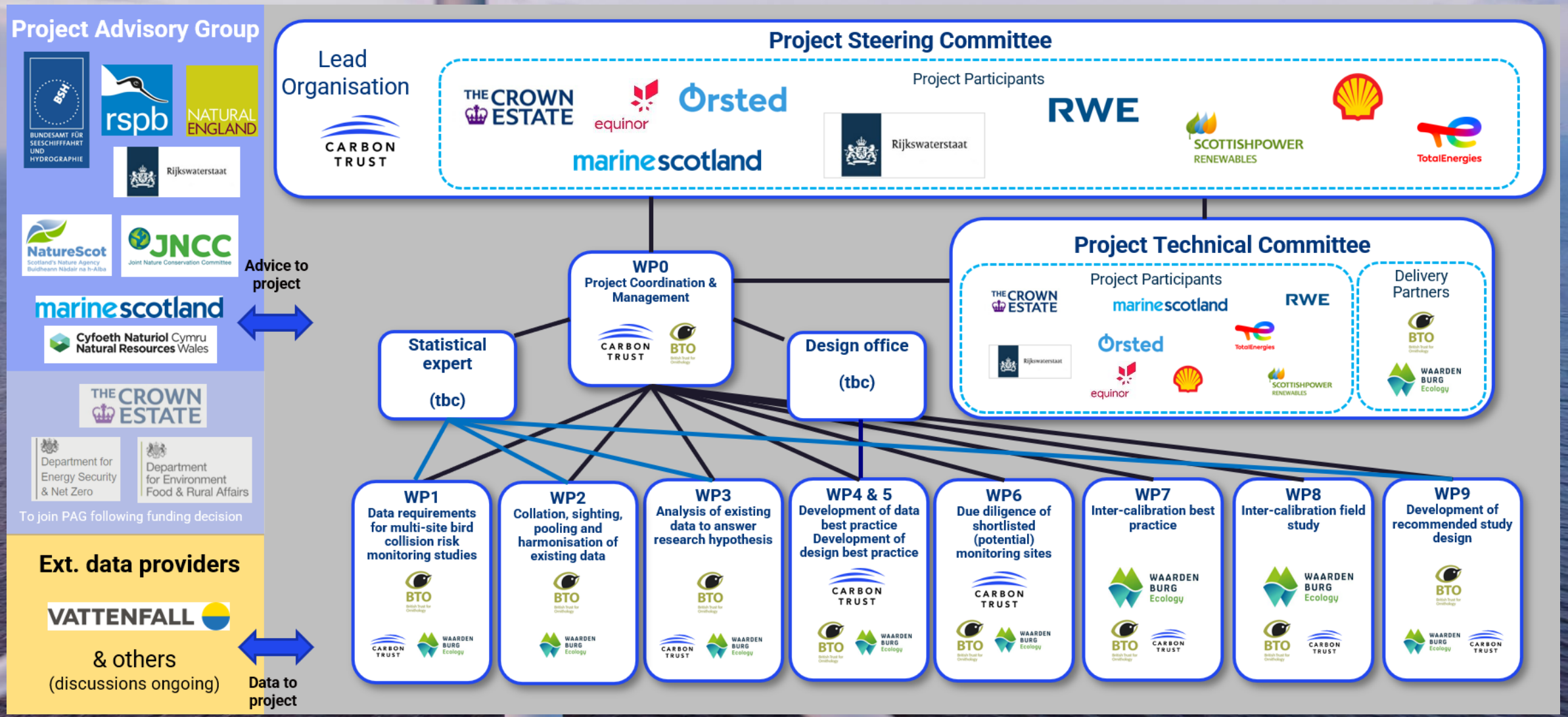
Motivation

- Bird collision risk plays a major role in consenting
- Predictions of collision risk models have uncertainty, offshore monitoring studies showing few incidents
- ORJIP pre-study has highlighted the importance to collect much more data to derive empirical collision rates
- This is an effort too big for single windfarm sites – needs a coordinated approach
- Also need to look at reliable technology and reducing the effort with regard to future studies

Objectives and approach

Develop statistical approach to analyse data together	Develop recommended study design	Develop guidance for wind farm developers and operators	Field study to assess capabilities/limitations of monitoring systems
• Review data from existing studies • Develop statistical framework that will allow data pooling • Establish a database to gradually grow the evidence base	• Make data from monitoring studies (more) comparable • Review and mitigate risks associated with offshore works	• Data collection, transfer, storage and management • Installation of monitoring equipment offshore	• Demonstrate ability to capture collisions and allow species identification • Develop calibration guidance

Project Organisation



Milestones and expected outcomes

Milestones	Expected outcomes
Kick-off: Oct/Nov '23	Reduced uncertainty around bird collision rates in OWFs, which in turn will reduce consenting risk and potentially consenting time
Review of existing data and information – month 7	Understanding of the minimum standards and best practices for future bird collision monitoring studies
Completion of field study – month 15	Understanding of the environmental and biological factors driving variation in bird collision risk in OWFs
Project closure after 2 years	Understanding of accuracy of and biases within monitoring equipment

Expected project impacts

- **Policy** – inform/influence UK and international consenting regulations and processes in respect of collision monitoring, foster international collaboration
- **Policy and science** – increase confidence in monitoring systems and outcomes of studies, reduce uncertainty in predictions from collision risk models
- **Science** – close knowledge gaps, provide data framework and inform scientific discussion
- **Offshore wind industry** – increase quality and reduce preparation times, risks and cost of monitoring campaigns
- **Offshore wind industry and policy** – inform Environmental Impact Assessments, reduce times of consenting processes
- **Environment** – by analysing data collected at multiple sites, gain a clearer understanding of the drivers of collision risk, enabling the identification of more effective mitigation options

What if PrediCtOr did not happen?

- Lack of guidance leaves uncertainty and risks, creates effort and costs for windfarm developers/operators
- Site-specific surveys with different designs and methodologies – open questions regarding comparability – uncoordinated efforts
- This will hinder derivation of empirical collision rates
- Remaining uncertainty in consenting

JNCC

Procellariiform Behaviour & Demographics (ProcBe)

OWEC Programme Steering Group

18th Sept 2023

Lise Ruffino (JNCC)

Procellariiform Behaviour & Demographics (ProcBe)

"Strategic shearwater and storm-petrel demography, distribution, and at-sea behaviour to improve understanding of impacts of offshore wind farms on SPA populations in UK waters"

JNCC

Offshore Wind Areas

ScotWind

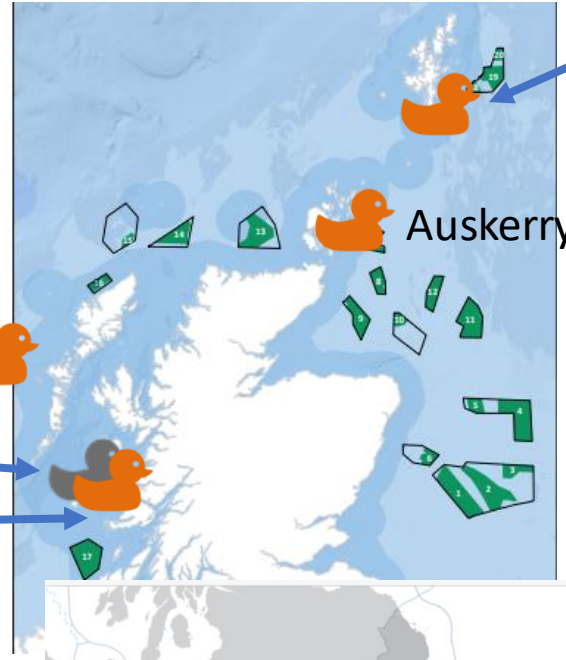
Mousa

Auskerry

St Kilda

Rum

Treshnish



Study colonies for MSW

Study colonies ESP or LSP

Copeland

Skomer/Skokholm

FLOW

Offshore Wind Leasing Round 4

THE CROWN ESTATE

Offshore Wind Leasing Round 4 projects

1	RWE Renewables 1500 MW capacity
2	RWE Renewables 1500 MW capacity
3	Green Investment Group - Total 1500 MW capacity
4	Consortium of EnBW and BP 1500 MW capacity
5	Offshore Wind Limited, a Joint Venture between Cobra Instalaciones y Servicios, S.A. and Flotation Energy plc 480 MW capacity
6	Consortium of EnBW and BP 1500 MW capacity

The four seabed Bidding Areas

1 Dogger Bank	3 South East
2 Eastern Regions	4 Northern Wales & Irish Sea

Skokholm

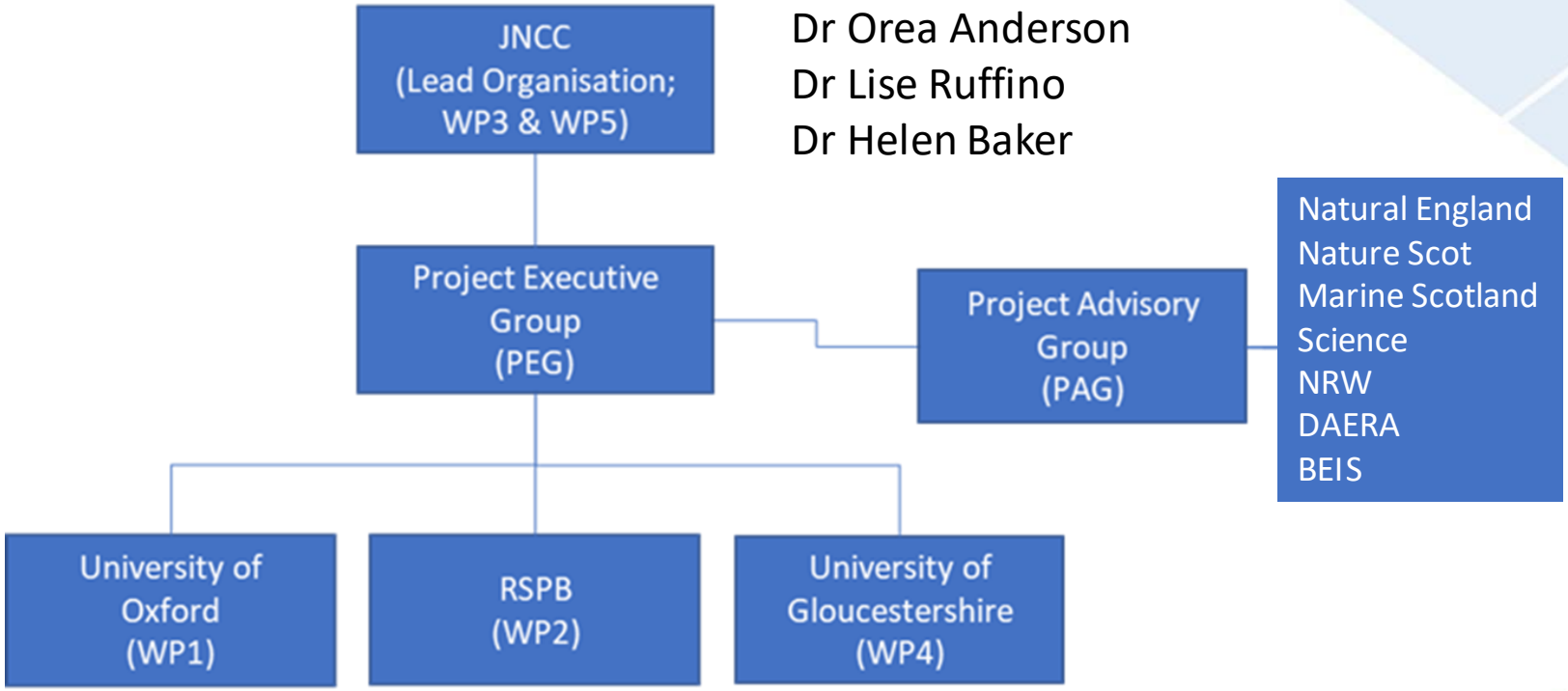
Scilly

JNCC

Evidence & Change

- Informing OW development in Celtic, Irish and NW Scotland Seas
- Reduce uncertainty in assessing the likely effects of Offshore Wind developments on **Manx Shearwaters** and **Storm-petrels**
- At-sea behavioural evidence, especially **flight heights**, and identifying **important areas** for SPA populations
- Standard **demographic rates** and best **population modelling** options for assessments

The ProcBe Consortium



Strategic shearwater and storm-petrel demography, distribution, and at-sea behaviour to improve understanding of impacts of offshore wind farms on SPA populations in UK waters

WP 1: Manx shearwaters
Distributions at sea, movements, behaviour, and connectedness to SPAs
Flight Speed and Flight Heights (tags)

WP2: Storm-petrels
Distributions at sea, movements, behaviour, and connectedness to SPAs
Flight Speed and Flight Heights (tags)

WP3: Observed flight heights
Manx Shearwaters and European Storm-petrels

WP4: Demographic rates and PVA modelling
Manx Shearwaters and European Storm-petrels

WP5: Project management and Communications
Reporting to OWEC
Stakeholder Engagement
Tailored publications

JNCC

Outputs

- Annual interim reports as required by OWEC
- Final project report (Dec 2026)
- Best practice guidelines for Procellariiformes and OWF impact assessment (Dec 2026)
- Project webpage, technical summaries, webinars, workshops, posters/ talks at conferences (JNCC will organise and co-author these as appropriate)
- Peer-reviewed journal papers (WP leads plus partners)

High Level Outcome

"Widespread understanding throughout the industry of how to approach Manx Shearwater and Storm-petrels in the impact assessment process for OWF".

Celtic, Irish, Hebridean and North Scotland Seas

Project Outcomes

1. Spatial distribution of MSW and ESP in English, Welsh, Scottish and Northern Irish waters. This is crucial for understanding whether and how to scope these species in OWF impact assessment.
2. Typical flight height, flight speeds and other behaviours of MSW, ESP and LSP in UK waters. This is crucial for understanding how to treat these species in OWF impact assessment, particularly Collision Risk Modelling elements of the process.
3. Improved understanding of MSW and ESP demography. This is crucial for predicting population impacts from OWFs.
4. Best practice population modelling for use in HRA and EIA of these, and many other, species.

Impacts

- Significantly reduce uncertainty around whether and how to include Procellariiformes in assessments for new OWF developments
- Informing Policy
  - Tailored reports/guidance
  - Engagement across range of sector organisations
- Reduced Consenting Times
  - Significantly enhancing evidence for Procellariiformes should streamline consenting process and aid in reducing consent times
- Reduced Environmental Impact
  - Will inform assessments for new projects to avoid potential conflict with Procellariiformes species

Project Management

- JNCC Lead Organisation
- JNCC overall Project Manager for ProcBe
  - Contract with The Crown Estate
  - MoAs with Project Partners
  - Project plan and risk assessment & mitigation
  - Financial management
- Reporting
- Coordination of project meetings
  - Kick-off meetings (Partners and PAG)
  - Pre- and post- season meetings each year (Partners)
  - Annual PAG meetings
- Communications planning and coordination

Communications & Dissemination

- Creation of project website and social media announcements (Dec 2023)
- Newsletter and website updates (Feb 2025, 2026)
- Webinars with SNCBs and industry on best practice guidelines (Dec 2026)
- Peer-reviewed publications submitted

Reducing Seabird Collisions Using Evidence (ReSCUE)

OWEC PSG 18 Sep 2023

Offshore Wind Evidence + Change Programme

The problem

Half of world's bird species in decline as destruction of avian life intensifies

State of the World's Birds report warns human actions and climate crisis putting 49% in decline, with one in eight bird species under threat of extinction

Climate crisis: British seabird numbers decline by up to 70 per cent, due to more frequent storms and lack of food

Bird flu outbreak devastates UK seabird colonies

By James Ashworth
First published 28 June 2022

50

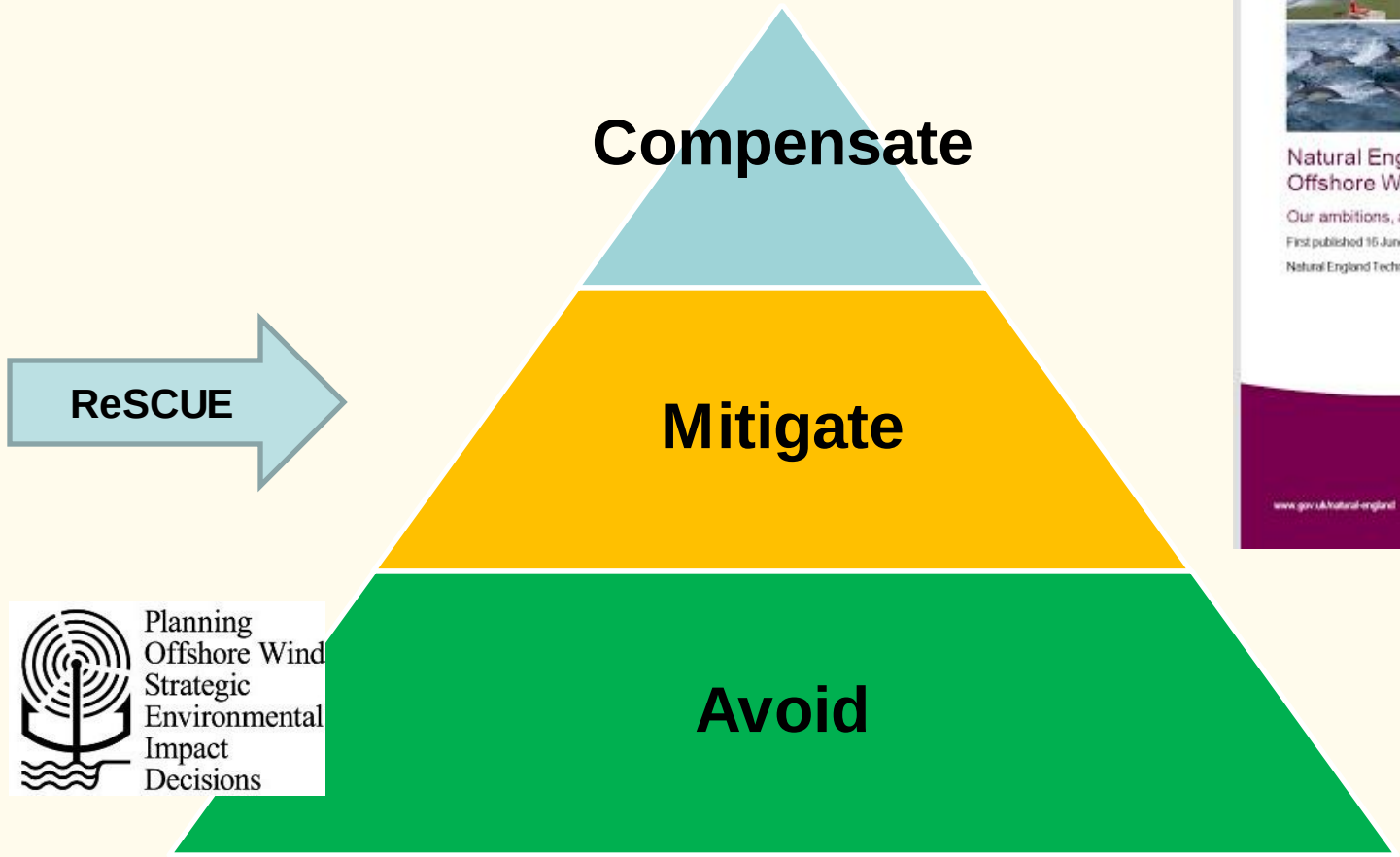
Thousands of seabirds are dropping dead from bird flu at some of the UK's most important seabird colonies.

PERMISSION?

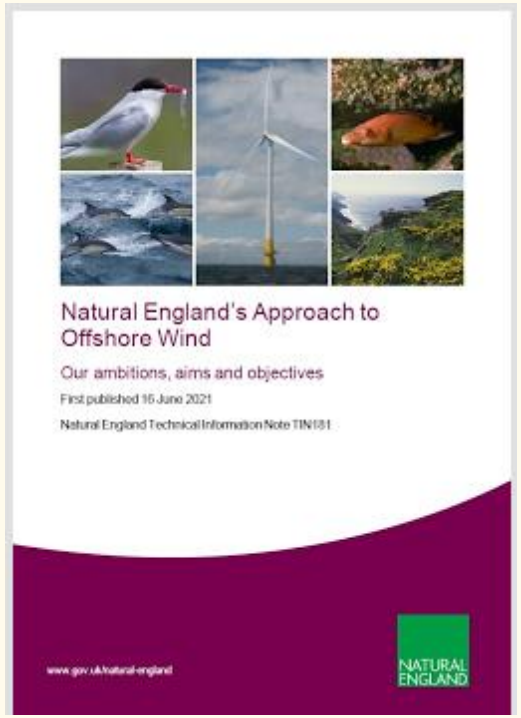
Cumulative mortality estimates

Kittiwake: ~4,000
Gannet: ~3,000
GBBG: ~1,000
HG: ~750
LBBG: ~500

Mitigation

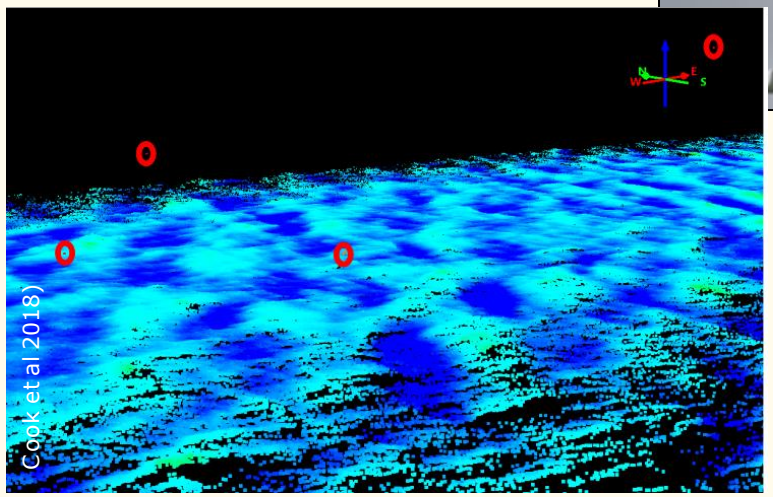


Planning Offshore Wind Strategic Environmental Impact Decisions

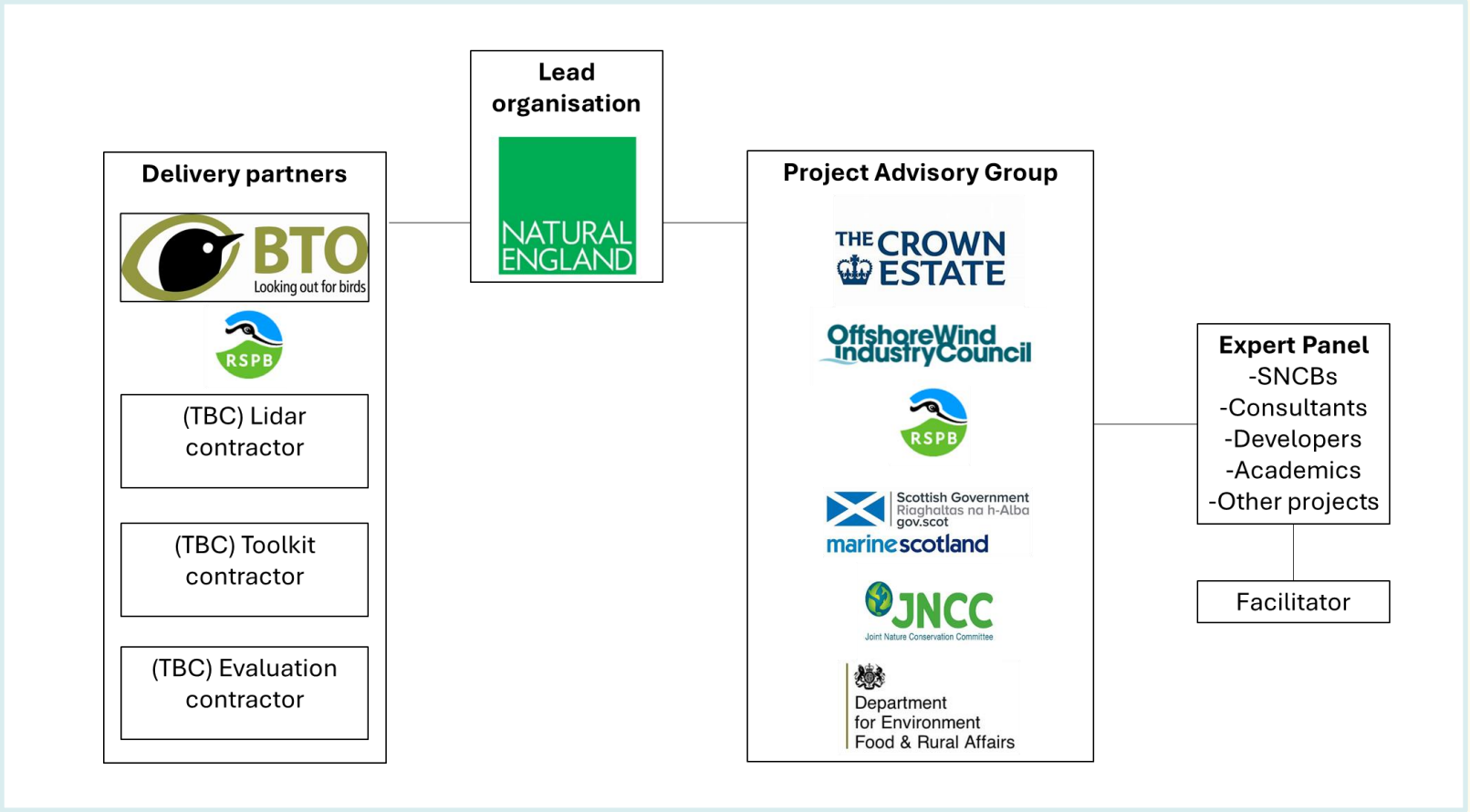


How to mitigate collision?

- Increasing the air gap could significantly reduce collisions
- But… there is a lack of confidence in existing seabird flight height data underpinning assessments and potential mitigation



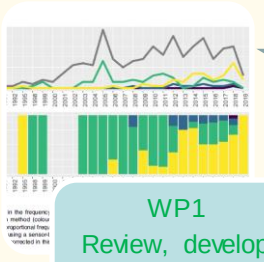
Who is involved with ReSCUE?



Project outcomes

WP0 Project set-up

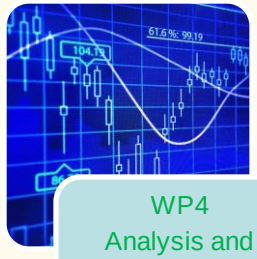
Project gate



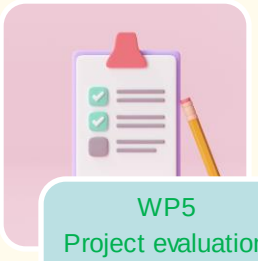
WP1
Review, develop and validate methods for collecting and analysing seabird flight height data

WP2
Seabird flight height data collation and collection

WP3
Toolkit development



WP4
Analysis and application of flight height data and toolkit



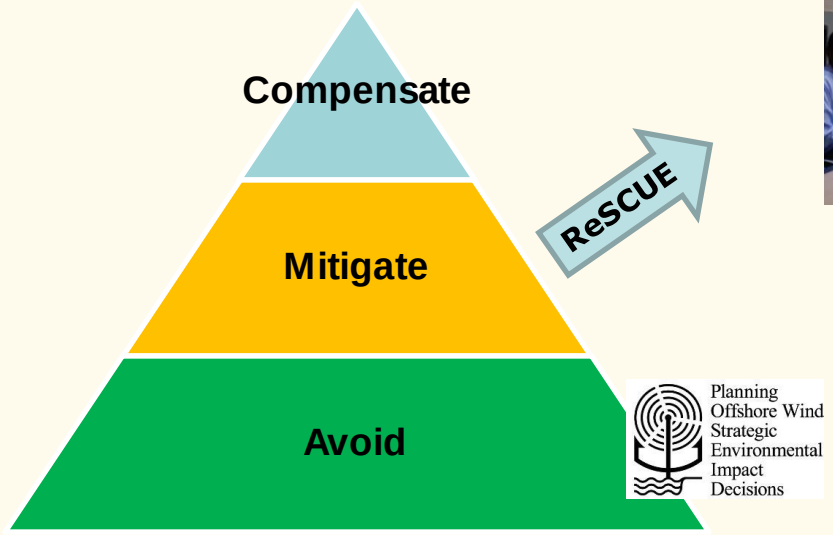
WP5
Project evaluation

1	2	3	4	5
• Deep understanding of methods • Standards informed by validation	• Data library • New surveys to fill gaps	• Publicly available toolkit to display seabird FH data	• Guidance for usage of toolkit • Cost-benefit analysis • Mitigation options	• Project evaluation • Impact evaluation

Project impact

- Mitigation solutions
- OWES
- Cost-benefit

- Improved impact assessment
- Less disagreement
- 'Headroom'?



- Standard methods
- International database
- **Less impact, faster consent**

042 Strategic Compensation for Offshore Wind: Project Overview

18th September 2023

Presentation to OWEC PSG
Kat Route-Stephens

Agenda

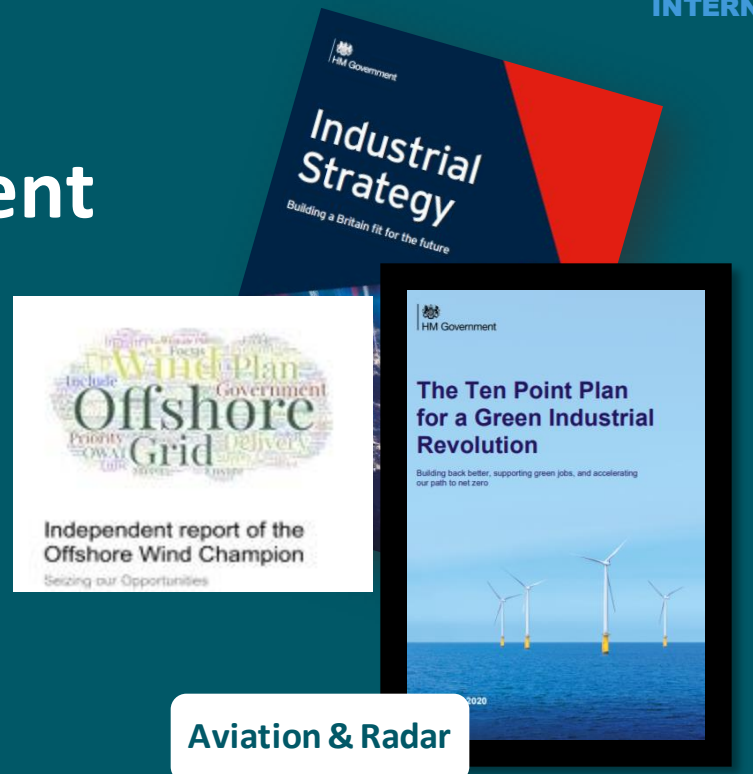
- Introduction to OWIC
- What the strategic compensation challenge is
- Overview of project
- Outcomes and impacts
- Who's involved
- Q&A

OffshoreWind IndustryCouncil

Offshore Wind Evidence + Change Programme

Offshore Wind Industry Council (OWIC)
A Partnership between Industry and Government

- Senior level Government and Industry forum, established May 2013, delivering the offshore wind sector deal published March 2019
- Members from leading UK and global firms in offshore wind – including Developers and Original Equipment Manufacturers
- British Energy Security Strategy: Ambition to deliver **50GW by 2030** of offshore wind (including 5GW floating offshore wind)
- Minister & Champion led Offshore Wind Acceleration Taskforce (OWAT): Tim Pick's report published April 23
- OWIC Derogation Subgroup:



bp · VATTENFALL · TotalEnergies · SCOTTISHPOWER RENEWABLES · sse Renewables · OW OCEAN WINDS · Ørsted · equinor · CORIO · RWE

OffshoreWind IndustryCouncil

Offshore Wind + Cl… Programme

Find out more: **www.owic.org.uk/**

Why is an approach to Strategic Compensation needed?

- Instances of derogations for offshore wind plans and projects increasing
- Significant delays to project consenting and deployment, up to 4 years
- UK ambition of 50 GW by 2030 and contributions to net zero target
- Alignment to achieve both:
  - Improved outcomes for the marine environment
  - Sustainable deployment of offshore wind at pace
- Need to move beyond project level compensation to "strategic approach"
- Identified as a potential solution for addressing OWF consenting challenges
  - British Energy Security Strategy
  - Defra's Offshore Wind Environmental Improvement Package
  - OWEC Priorities for Investment 2022
  - Round 4 Offshore Wind Leasing Plan Level HRA
- Near term and future leasing: ScotWind, INTOG, Celtic Sea and beyond

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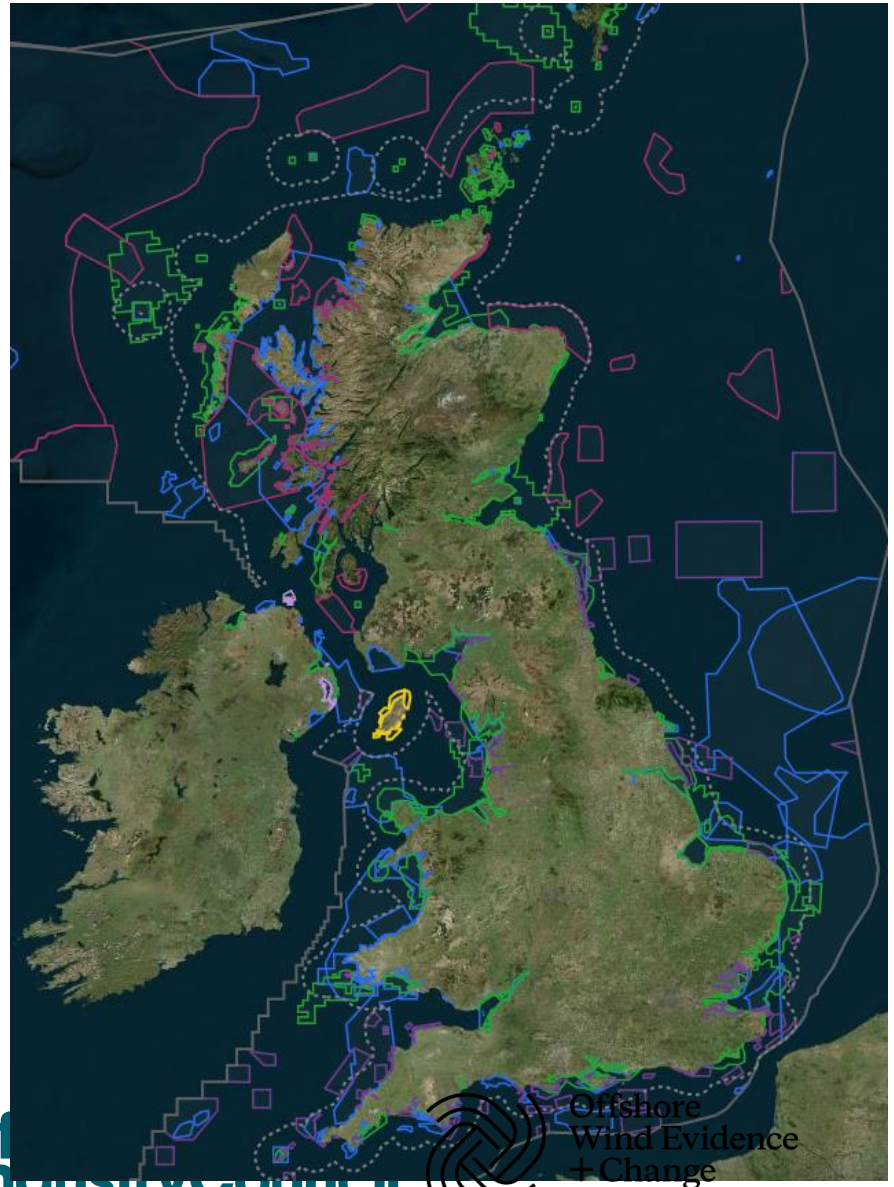
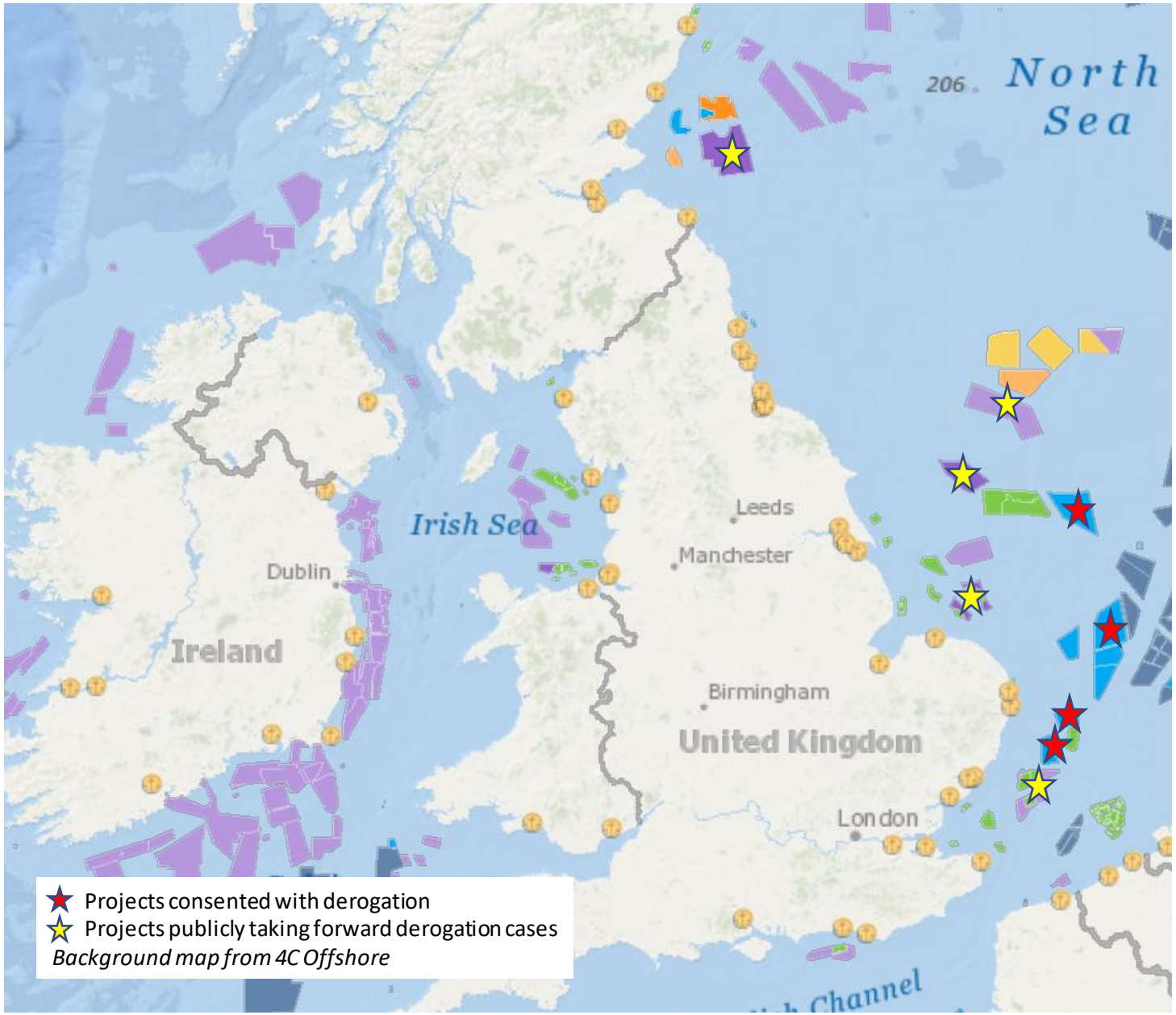
Compensation requirements for UK projects



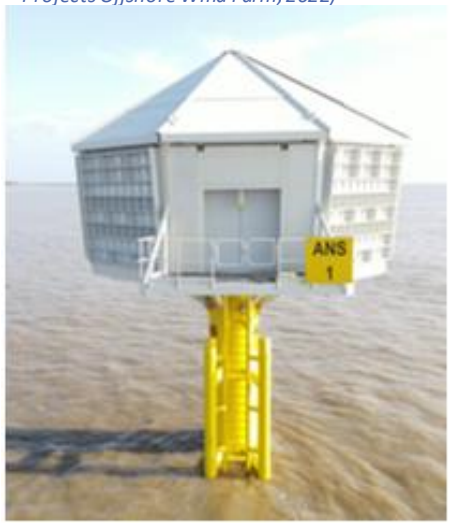


Offshore Wind Evidence + Change Programme

Strategic Compensation Project Overview

- Lead Organisation: Offshore Wind Industry Council (OWIC) Sector Deal Delivery Ltd
- Main objectives are:
  - Developing and testing a Delivery Mechanism working with stakeholders to agree how these are implemented, enforced, monitored and managed.
  - Test and monitor potential strategic compensation measures through specific practical pilots.
  - Define and test the most appropriate approaches to monitoring and managing strategic compensation measures.
  - Provide compensation options that can satisfy Habitats Regulations / Marine and Coastal Access Act compensation requirements for offshore wind plans and projects
- Seven work packages, including additional resource capacity

Example predator control fence (Source: Norfolk Projects Offshore Wind Farm, 2022)



Ørsted's Hornsea Three Kittiwake artificial nesting structure (Source: Ørsted, credit: R7M)

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Strategic Compensation Project Outcomes & Impacts

High Level Outcome

Support the development and implementation of a more strategic approach to compensation measures when a Habitats Regulations (*or MCAA*) derogation is required. By testing measures in the field, with the processes and procedures that are required to deliver and manage them, the work will provide evidence to support the scaling up of specific measures as well as highlighting and finding solutions to delivery challenges so that these lessons can be considered in strategic compensation related policy development across the UK.

Category	Impact
8a. Strategic Compensation	Confidence across OWF consenting stakeholders and developers, that the piloted measures are effective, are supported by robust monitoring and enforcement principles and meet project and plan level Habitats Regulations requirements.
8a. Strategic Compensation	Confidence in a suitable delivery mechanism(s) for the delivery of strategic compensation that can be utilised by multiple OWF developers and by which measures can be designed, secured, allocated and enforced
1a. Influencing Policy	Implementation of new policy across the UK on the applicability, implementation and use of strategic compensation for OWF as a direct result and influence of the strategic compensation pilot projects.

Who is involved?

Project Advisory Group & COWSC

- PAG to steer project
- Close ways of working with Collaboration on Offshore Wind Strategic Compensation (COWSC) Delivery Group & Expert Groups chairs
- Avoiding duplication and making best use of resources

OWIC Derogation Subgroup: Delivery Partner

- Significant **financial** and **in-kind** contributions
  - ~£0.5mill financial contributions
  - Access to compensation schemes :
    - onshore and offshore artificial nesting structures
    - Predation reductions schemes
    - Sandeel measures implementation plan development
    - Habitat creation/restoration schemes
  - Sharing of data and evidence

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