



Offshore
Wind Evidence
+ Change
Programme

Offshore Wind Evidence and Change Programme

Programme Steering Group Meeting

Thursday 16 September 2021





Offshore
Wind Evidence
+ Change
Programme

Welcome

Chair Huub den Rooijen, Managing Director,
Marine, The Crown Estate



Agenda

14:00 Welcome by Huub den Rooijen, Managing Director, Marine, The Crown Estate *(5 mins)*

EVIDENCE

14:05 Programme overview from Mandy King, Offshore Wind Evidence and Change Programme Manager, The Crown Estate *(16 mins)*

- Main call projects
- Intermediate call projects
- Discretionary projects

14:21 Projects completed this quarter *(4 mins)*

- Ornithological headroom project by Sion Roberts, Marine Consents Manager, The Crown Estate

14:25 Project updates

- Future Offshore Wind Scenarios by Tristan Bromley, Policy Advisor, BEIS *(5 mins)*
- ECOWind by Mike Webb, Head of Marine Science, Natural Environment Research Council *(5 mins)*

14:35 [Discussion with PSG members and opportunity to ask any questions about what has been discussed so far](#) *(20 mins)*

CHANGE

14:55 Introducing the big questions that came out of the last PSG by Will Apps, Head of Marine Development, The Crown Estate *(3 mins)*

14:58 How the programme is driving change in government by Ros Gaulton, Head of Offshore Wind Compensation and Impact, Defra *(4 mins)*

15:02 [Breakout group session deep dive into how we can drive change](#) *(38 mins)*

15:40 Quick break *(5 mins)*

15:45 Review of key themes from breakout group sessions *(10 mins)*

15:55 Close by Chair Huub den Rooijen, Managing Director, Marine, The Crown Estate *(5 mins)*

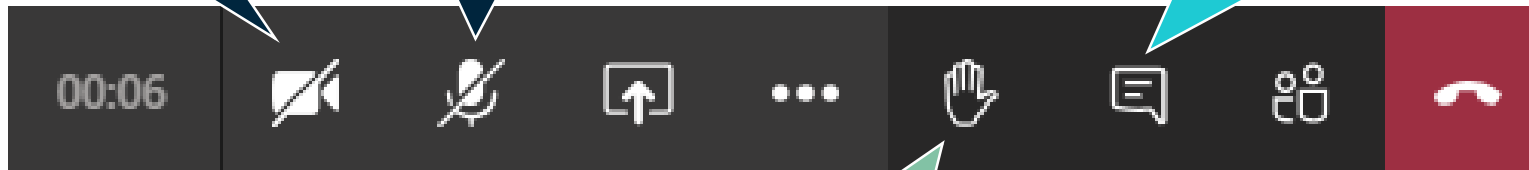


Taking part in today's meeting

Please turn your **camera on**

Please mute your **microphone** if you are not speaking

Please use the **Show Conversation** function to ask questions or comment.



Please use the **Raise Hand** function if you would like to speak or ask a question during the meeting

If you experience any technical difficulties then please let us know through the Show Conversation chat function

We will be recording this session for internal use only, we will not publish the recording.





Offshore
Wind Evidence
+ Change
Programme

Programme overview

Mandy King, Programme Manager, The Crown
Estate



2021 Main call projects funding decision

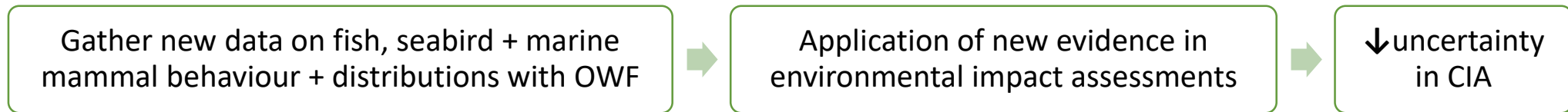
Title	Lead Organisation	Status
1. PrePARED: Predators and Prey Around Renewable Energy Developments	Marine Scotland Science	APPROVED Subject to contract
2. Remote Tracking of Seabirds at Sea: new methods to fill critical knowledge gaps in movements and population consequences	RSPB	APPROVED Subject to contract
3. POSEIDON: Planning Offshore Wind Strategic Environmental Impact DecisiONs	Natural England	APPROVED Subject to contract
4&5. The Cumulative Impact of Offshore Renewables on Shipping and Navigation & Turbine Impact on Vessel Navigation Equipment and Shore-based Infrastructure Communication Systems	Trinity House and MCA	Update to be provided at meeting



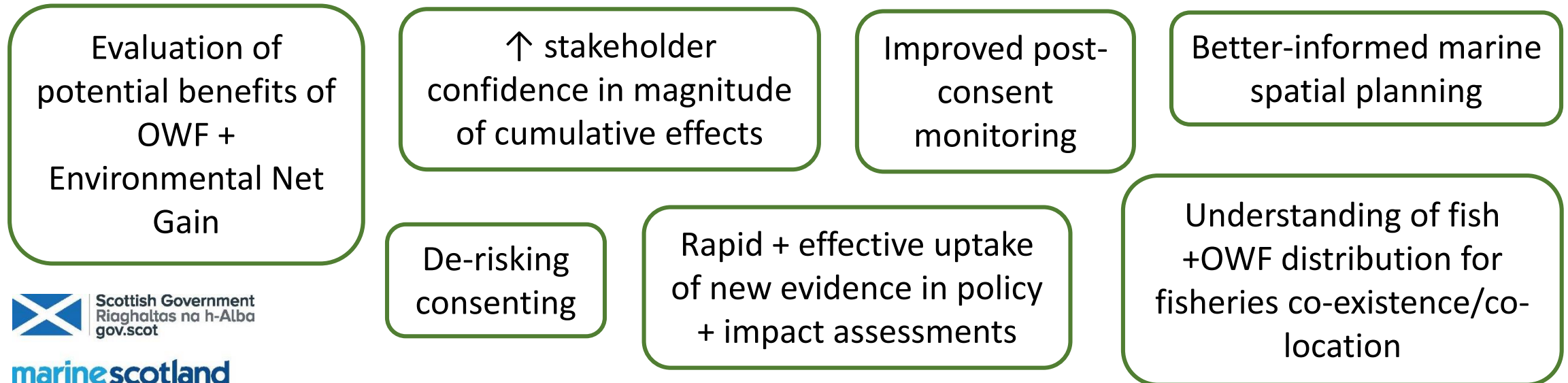
PrePARED: Predators and Prey Around Renewable Energy Developments



Aim: to improve understanding of cumulative environmental impacts and benefits from OW development



PrePARED Project Outcomes



Remote tracking of seabirds at sea

Why?

Improve certainty about wind farm effects on seabirds

- Reduce consent risk
- Inform future leasing
- Enable improved monitoring

What?

Priorities identified by industry groups:

Measure Special Protection Area (SPA) origins of birds at sea throughout the year

Improve population models that estimate impacts and inform compensation needs

How?

Motus automated radio telemetry for year-round tracking

Feasibility study, then rollout

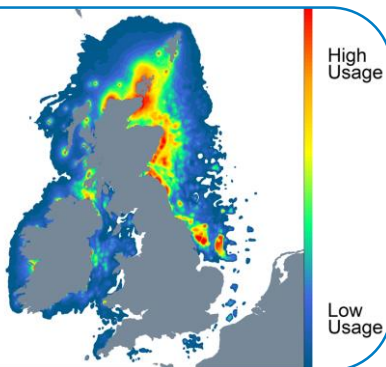
Gateways between stages minimise risk

Legacy for future monitoring / research

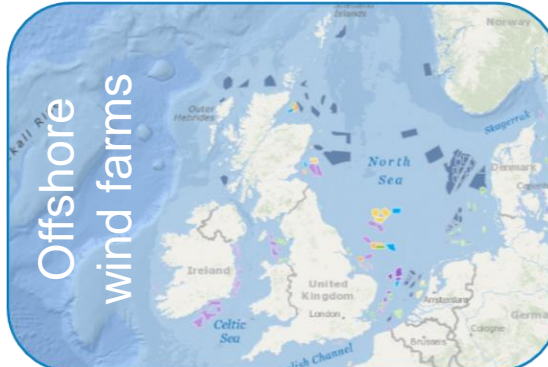
Who?



Breeding
kittiwakes



Offshore
wind farms



Motus
receiver



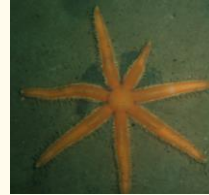
Kittiwakes



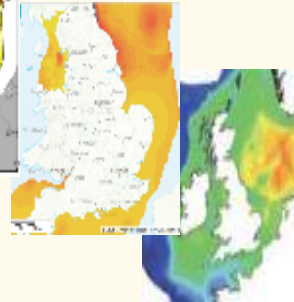
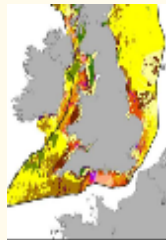
POSEIDON (Planning Offshore Wind Strategic Environmental Impact DecisiONs)



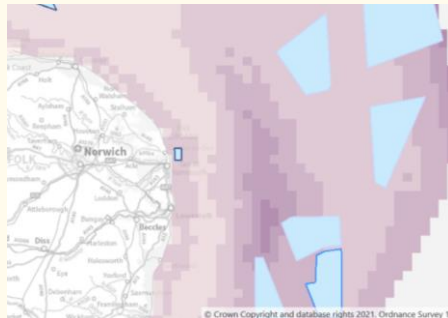
New
baseline
data



Updated
ecological
models



Integrated
risk & opp
map



- Delivery of new planning tools for Offshore Wind
- Framework for regional approach to baseline characterisation
- Greatest environmental risks clear at outset, along with potential mitigation / compensation requirements.
- Risk of reaching environmental limits sooner if largest impacts not avoided, leading to greater consenting risks

'Cumulative' project



GRAD

Driving Innovation for
Safer Maritime Navigation



Photo: Crown Estate Scotland

Assess the cumulative and 'in combination' OWF effects on shipping patterns and risks to safety of navigation

Develop navigation risk evaluation tool for predictions to 2030 and beyond at UK national scale

Use of bridge simulator to assess risks at user level with mariner human factors

Analyse effect of technology/routing/guidance mitigations

Outcome: Identify balance of potential technology, routing and policy/guidance interventions to maintain maritime safety & gather robust evidence to facilitate OWF consents

Wind farm
developments

Accumulation
Scale
Geospatial boundaries
Turbine size

Complexity
Constriction/Congestion
Risk

Mitigation

Guidance
Rules
Technology

Shipping
developments

Traffic patterns
Fleet mix (e.g. MASS)
Technology
Operational concepts

'Equipment' project



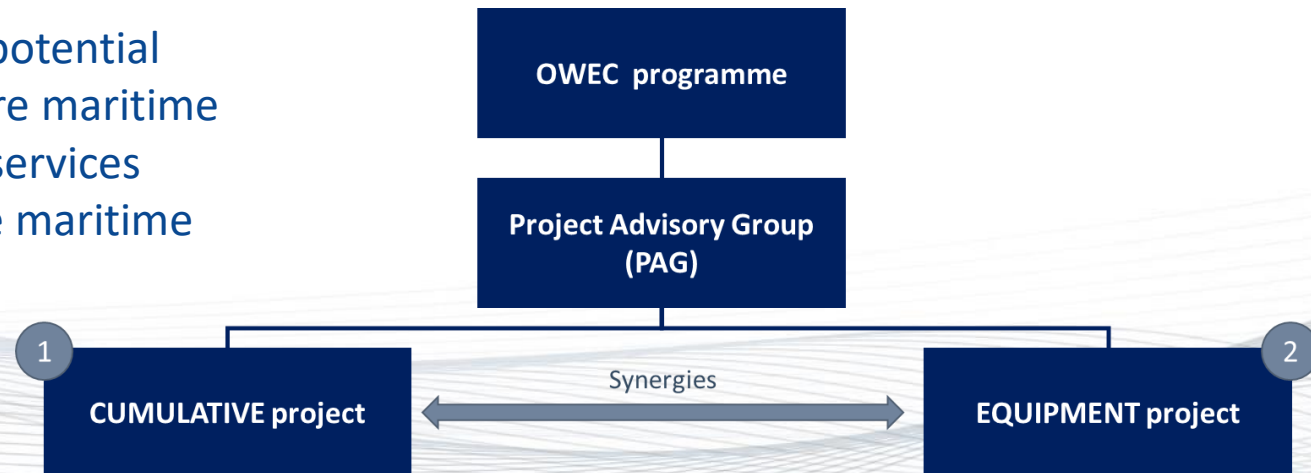
Assess the effects of turbine towers and blades on maritime navigation and communications technology – current and potential future

Identify technology and operational mitigations via models, simulation and sea trials

Use of bridge simulator to assess risks at user level with mariner human factors

Analyse effect of technology/guidance mitigations, together with those from 'Cumulative' project

Outcome: Understand and mitigate the potential effects on the current and possible future maritime infrastructure, systems, equipment and services essential for safe, secure and sustainable maritime operations around OWF



OWEC Projects in numbers

26 in total

- 2** *Completed in 2021* - East Coast Grid Study, Ornithology Headroom
- 5** Main Call in 2021
- 4** Intermediate Call in 2021
- 3** Discretionary in 2021
- 12** Pathfinder (pre-2021 commitments) - See project dashboard for updates



Intermediate call: proposals accepted

Title	Lead Organisation	Description
1. Characterising the Irish and Celtic Seas: A comparison exercise with the North Sea	Natural Resources Wales (NRW)	Desk-study and underwater noise modelling to compare noise propagation and efficacy of mitigation in the Celtic Sea with the North Sea. To better understanding transferability of findings of noise effects on invertebrates, fish and marine mammals
2. Nature Inclusive Cable Enhancement	Cefas	Field trials to compare traditional cable protection methods with nature inclusive design solutions, evidencing opportunities for marine ecological enhancement.
3. Fisheries sensitivity mapping and displacement modelling	Cefas	A holistic assessment of the economic impact of offshore wind farms on the fishing sector through case studies - includes constraints and opportunities for the fishing industry .
4. Reducing uncertainty of multiple stressors within Environmental Impact Assessments for Floating Offshore Windfarms	Cefas	Evaluation of the scientific evidence underpinning our knowledge of a) Scour effects b) electromagnetic fields emitted by dynamic cables and c) Contaminants for floating offshore wind farms. Supported by modelling (where possible).



Discretionary (£<50k projects)

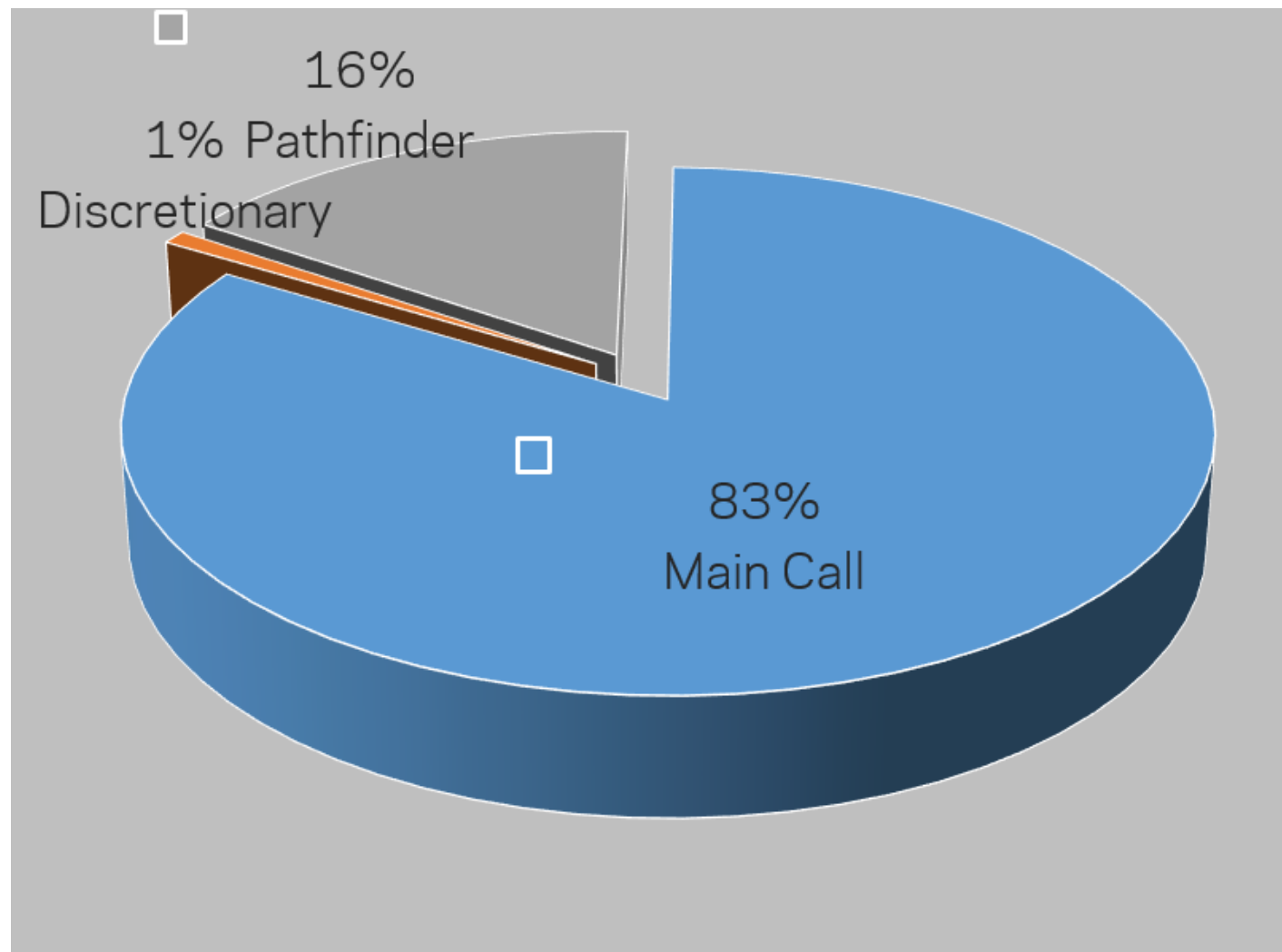
Title	Lead Organisation	Description
1. Strategic Targets for Net Gain in the Coastal and Marine Environments	Seabed User and Developer Group with the Wildlife Trusts.	Task and Finish group established to identify and agree clear strategic targets for net gain which will assist in improving and restoring the marine environment.
2. Benthic Compensation	Natural England	Desk-based assessment of the likely effectiveness of different compensation measures in offsetting impacts on benthic habitats within Special Areas of Conservation (SACs) and Marine Conservation Zones (MCZs) from offshore wind farms and their associated infrastructure (e.g. cables).
3. Floating Offshore Wind and Fisheries: Virtual Windfarm Planning	The Crown Estate with the National Federation of Fisherman's Organisations (NFFO)	Three evidence-led, expert workshops to explore real-life constraints in the planning of a 'virtual' floating offshore wind farm. This will be a pilot planning exercise with fishing industry and offshore wind stakeholders.



Where is the money going?

By project call / size

1. 2021 main call – projects between £0.5M – £5M (83%)
2. Pathfinder projects – pre 2021 commitments (16%)
3. Discretionary projects – £<50K (1%)



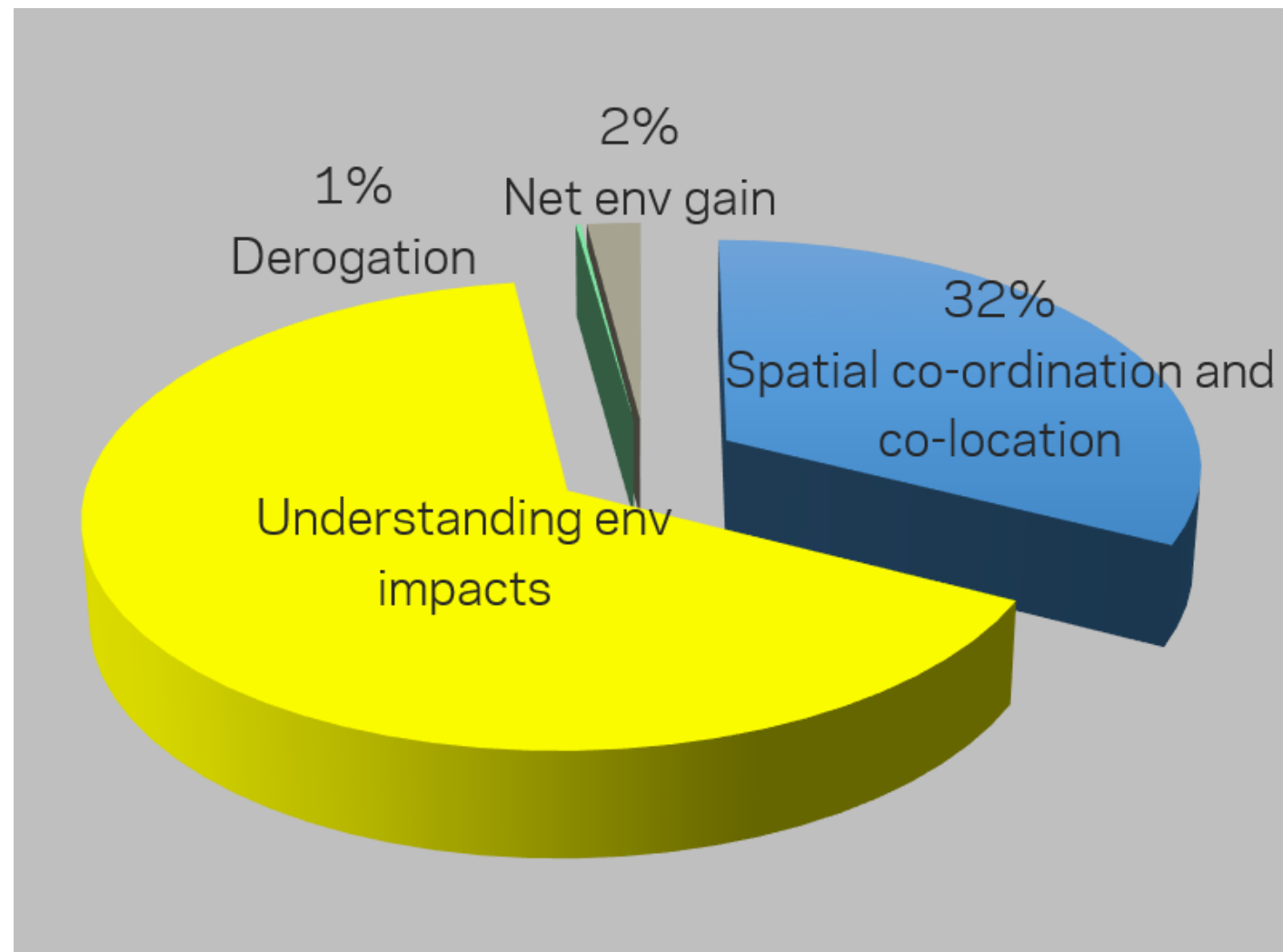
2021 Intermediate call projects not included as funding decision not yet taken.



Where is the money going?

By theme

1. Understanding of environmental impacts and benefits (65%)
2. Spatial co-ordination and co-location (32%)
3. Delivering net environmental gain (2%)
4. Investigating the derogation process to unlock further deployment (1%)



Many projects contribute to more than one theme. Such projects were allocated to the theme that they *most* contributed to.



Forward Look

- Main Call - Signing the funding agreements and project kick-off
- Roll out of MS Teams for collaboration
- Intermediate projects - Terms of Reference due by 31 October 2021, formation of Project Advisory Groups
- Programme Steering Group meetings 2022

Reminders

- Discretionary projects welcome any time to OWECProjectsApplications@thecrownestate.co.uk
- Governance documents available on the Secure File Transfer Portal (updated regularly)



**Projects completed
this quarter**





Offshore
Wind Evidence
+ Change
Programme

Ornithological headroom

Potential solutions to legal barriers in securing
as-built parameters of OWF by Sion Roberts,
Marine Consents Manager, The Crown Estate



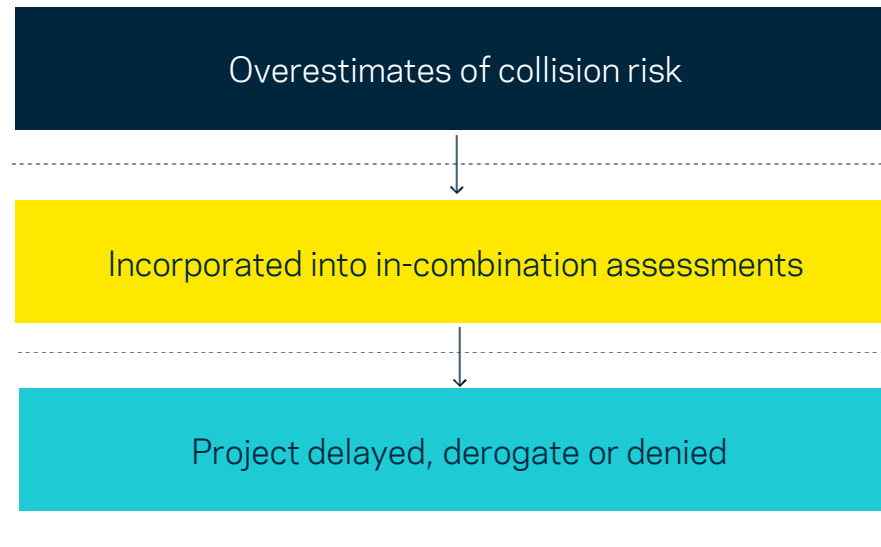
Rochdale Envelopes

A Rochdale Envelope uses the worst-case parameters to assess the potential worst-case environmental impacts of OWF development.

Actual impacts are generally lower than those in the assessment.

They have significant benefits and are essential to ensure that consents are flexible to allow for developing technology.

However, the use of Rochdale Envelopes has had an unintended consequence when assessing the overall impact of windfarms in the UK.



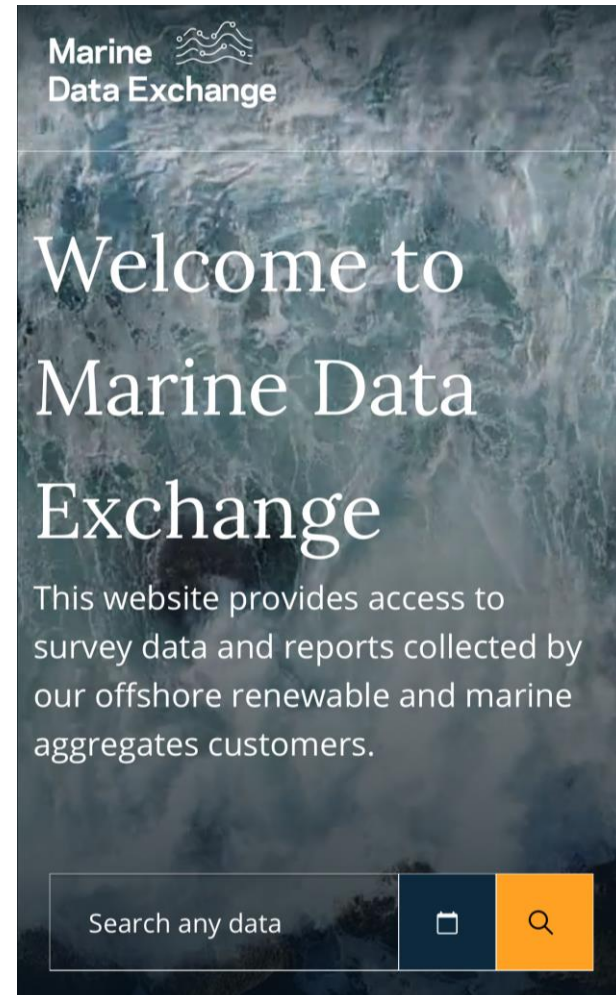
Project

- Originally two separate proposals (RUK OCLG and Natural England)
- Brought together and funded by The Crown Estate through the Offshore Wind Evidence & Change Programme
- Project aims:
 - Review and define the legal status of 'as-built' wind farms
 - To be considered across the jurisdictions of England, Wales, Scotland and Northern Ireland
 - Suggest solutions to give confidence that 'as-built' parameters can be used
 - Seek stakeholder agreement, where possible, respecting legal duties of Regulators
- Workshop 1 – exploring the issue, informed by a discussion paper
- Workshop 2 – seeking solutions and consensus
- Report and recommendations
- Out of scope – how 'as-built' parameters would be modelled and how headroom would be treated and applied in assessments



Key outcomes

1. Positive and collaborative approach
2. Resulted in five recommendations addressing three themes
 - Future consents
 - Historic consents
 - Further workstreams
- The report and a webinar of the project is available on The Crown Estate's Marine Data Exchange
www.marinedataexchange.co.uk





Victoria Redman
Womble Bond Dickinson

Victoria.Redman@wbd-uk.com

Sion Roberts
The Crown Estate

Sion.Roberts@thecrownestate.co.uk

Project updates





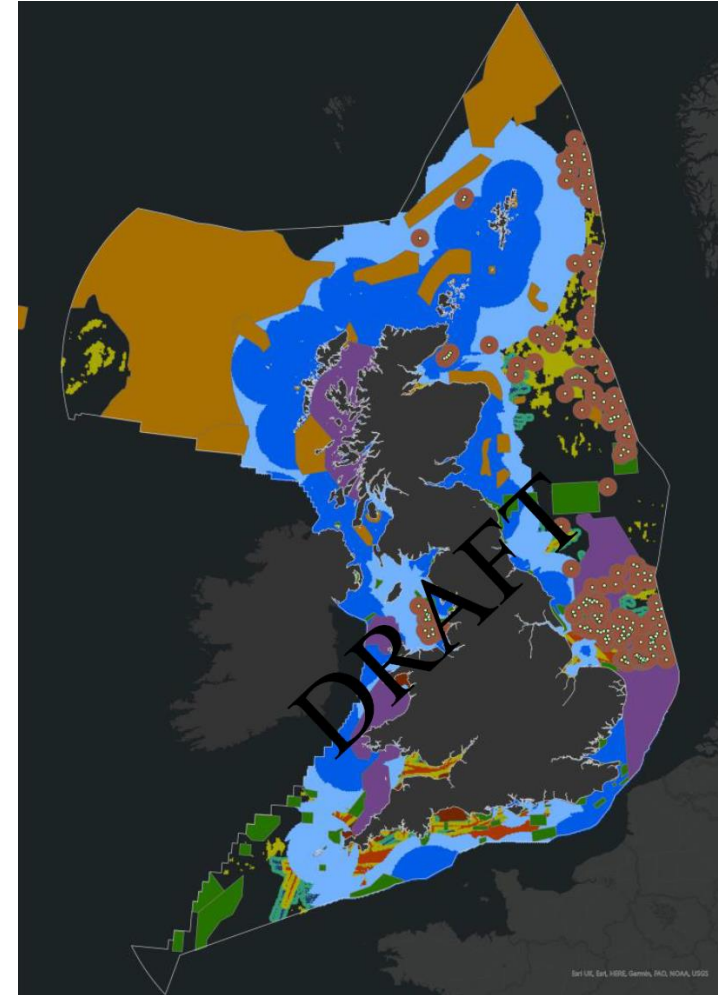
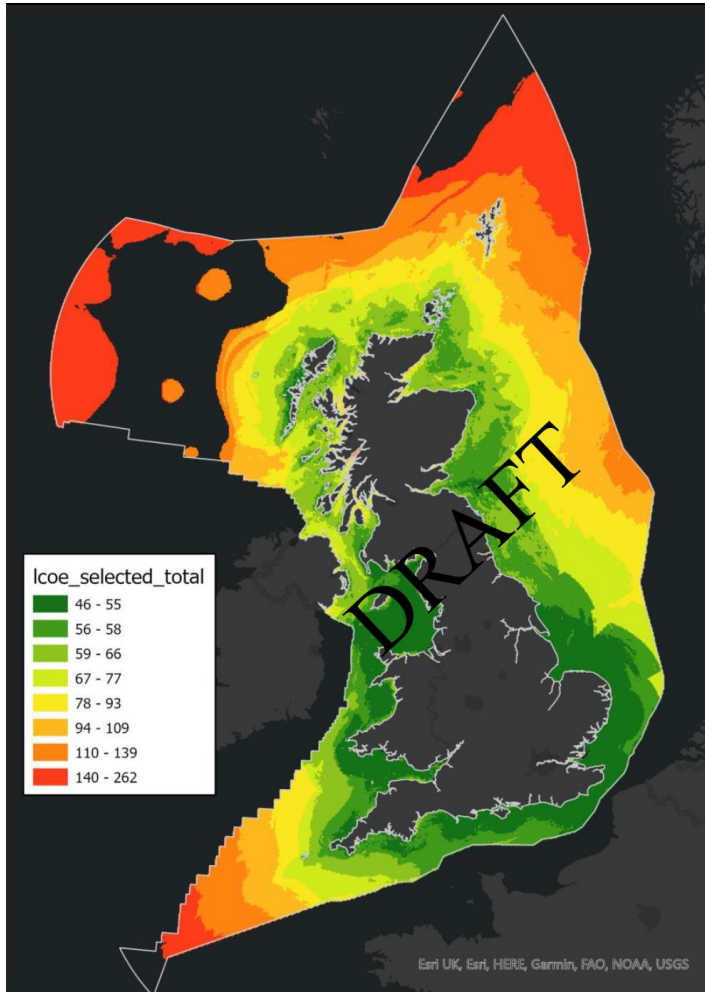
Offshore
Wind Evidence
+ Change
Programme

Future Offshore Wind Scenarios

Tristan Bromley, Policy Advisor, BEIS



Future Offshore Wind Scenarios - Progress Update





Offshore
Wind Evidence
+ Change
Programme

ECOWind

Mike Webb, Head of Marine Science, Natural
Environment Research Council



**Discussion with
PSG members and
opportunity to ask
any questions about
what has been
discussed so far**

Welcome cameras on





Offshore
Wind Evidence
+ Change
Programme

Introducing the big questions that came out of the last PSG

Will Apps, Head of Marine Development, The Crown Estate





Offshore
Wind Evidence
+ Change
Programme

How the programme is driving change in government

Ros Gaulton, Defra



Breakout group session deep dive



Welcome back

Review of key themes



Thanks and close

Chair Huub den Rooijen, Managing Director, Marine, The Crown Estate
