



Offshore  
Wind Evidence  
+ Change  
Programme

# Offshore Wind Evidence and Change Programme

Programme Steering Group Meeting

Wednesday 12 May, 2021



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# Agenda

10.00 Welcome by Chair Amy Ferguson, Programme Director - Offshore Wind Enabling Actions, Defra

## EVIDENCE

10.05 Pathfinder projects update by Mandy King, Programme Manager, The Crown Estate

10.10 Proposals received in the first project call: Project outcomes by lead organisations (*3mins each*)

- Proposals from Marine Scotland Science by Mike Palmer, Deputy Director for Marine Planning and Policy, Scottish Government
- Proposal from RSPB by Martin Harper, Executive Director, Global Conservation
- Proposals from Trinity House/Maritime and Coastguard Agency by Nigel Hare, Director Navigational Requirements & Nick Salter, OREI Lead
- Proposal from Natural England by Mel Hughes, Director of sustainable development programme

10.30 Next Steps by Mandy King, Programme Manager, The Crown Estate (10mins)

[Discussion on project call and process](#)

11.00 Effective engagement with industry by Benj Sykes, Offshore Wind Industry Council

11.05 Priorities for future project calls by Benj Sykes, Offshore Wind Industry Council & Dr Helen Baker, JNCC

[Discussion on future priorities](#)

## CHANGE

11.45 Mobilising change by Will Apps, Head of Energy Development, Energy, Minerals & Infrastructure, The Crown Estate

11.55 Close by Amy Ferguson, Programme Director - Offshore Wind Enabling Actions, Defra





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# Pathfinder projects update



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# Pathfinder projects

## What are they?

Collaborative projects and activities that predate the launch of the Programme in December 2020 and formation of the Programme Steering Group. These are being funded or part-funded and supported as part of this programme.

## Why are we doing them?

To generate momentum through action, support existing projects that align with the programme's purpose and "learn by doing" in advance of opening up the "calls for projects" to the Programme Steering Group in January 2021.

## What are they? How can I find out more?

See project dashboard – circulated in advance. Web updates and newsletter to follow.

12 projects/activities; 10 lead organisations (incl. BEIS, Defra, Marine Scotland, MoD/OWIC, RenewableUK, Natural England, NERC),

## Progress and highlights this quarter

- Funding approved for the offshore wind marine science programme (ECOWind). Joint programme led by the Natural Environment Research Council (NERC) to engage the academic community
- Strategic East Coast Grid Study complete and continues to inform the Offshore Transmission Network Review
- Future Offshore Wind Scenarios. Arup appointed as contractor and stakeholder workshops in April to define net zero pathways



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# Projects in first Main Call

Title	Lead Organisation	Status
1. PrePARED: Predators and Prey Around Renewable Energy Developments	Marine Scotland Science	LIVE proposal
2. Empirical evidence to deliver effective ornithological compensatory measures from offshore wind farm developments	Marine Scotland Science	<i>Deferred to future funding call</i>
3. Remote Tracking of Seabirds at Sea: new methods to fill critical knowledge gaps in movements and population consequences	RSPB	LIVE proposal
4. The cumulative impact of offshore renewables on shipping and navigation	Trinity House	LIVE proposal
5. Turbine impact on current and future vessel navigation equipment, shore-based infrastructure and communication systems in or near an offshore windfarm development	Trinity House	LIVE proposal
6. The impact of offshore renewable turbine layout on surface navigation and emergency response	Maritime and Coastguard Agency	<i>Deferred to future funding call</i>
7. POSEIDON: Planning Offshore Wind Strategic Environmental Impact DecisiONs	Natural England	LIVE proposal

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# Proposals received in the first project call

Project outcomes by lead organisations (*3mins each*)

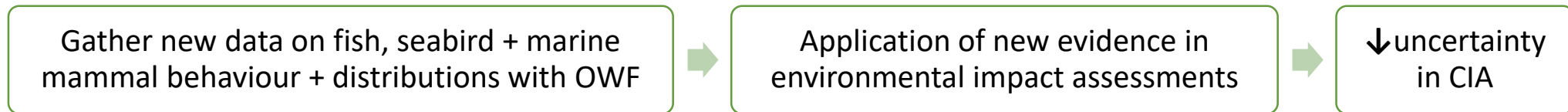
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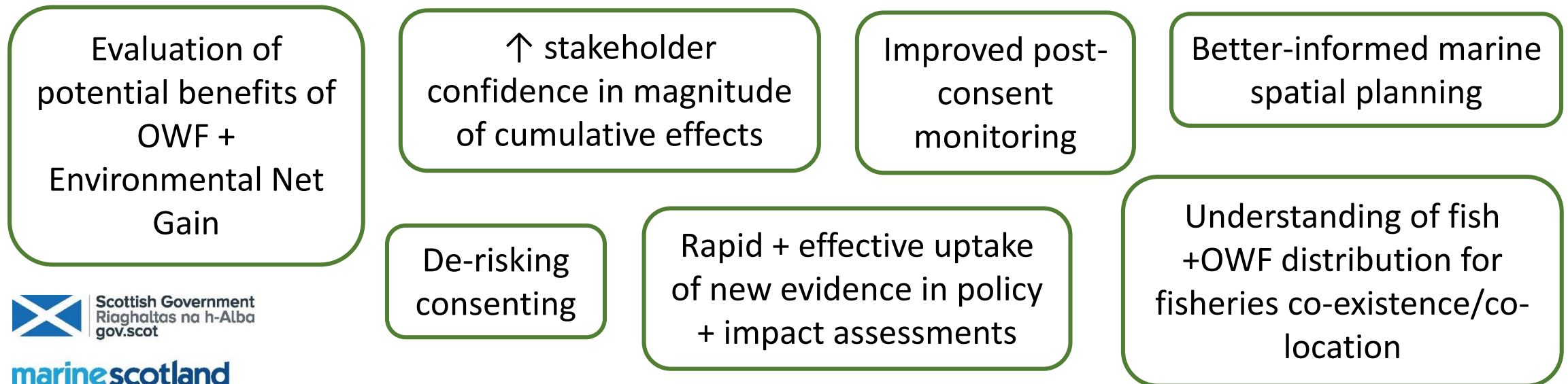
# PrePARED: Predators and Prey Around Renewable Energy Developments



**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

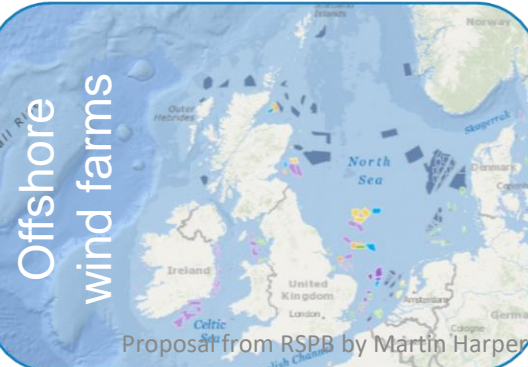
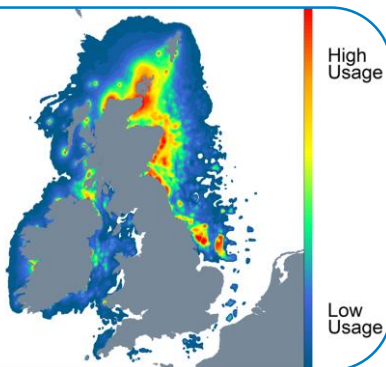
Gateways between stages minimise risk

Legacy for future monitoring / research

## Who?



Breeding  
kittiwakes



Motus  
receiver



Kittiwakes



# 'Cumulative' project



**GRAD**

Driving Innovation for  
Safer Maritime Navigation



Photo: Crown Estate Scotland

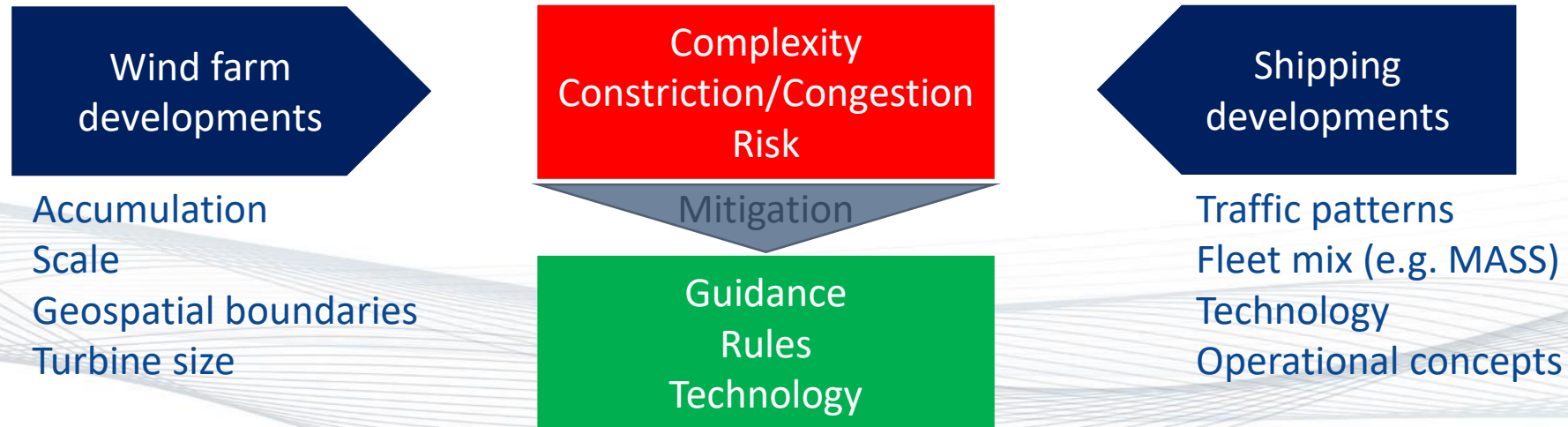
Assess the cumulative and 'in combination' OWF effects on shipping patterns and risks to safety of navigation

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



# 'Equipment' project



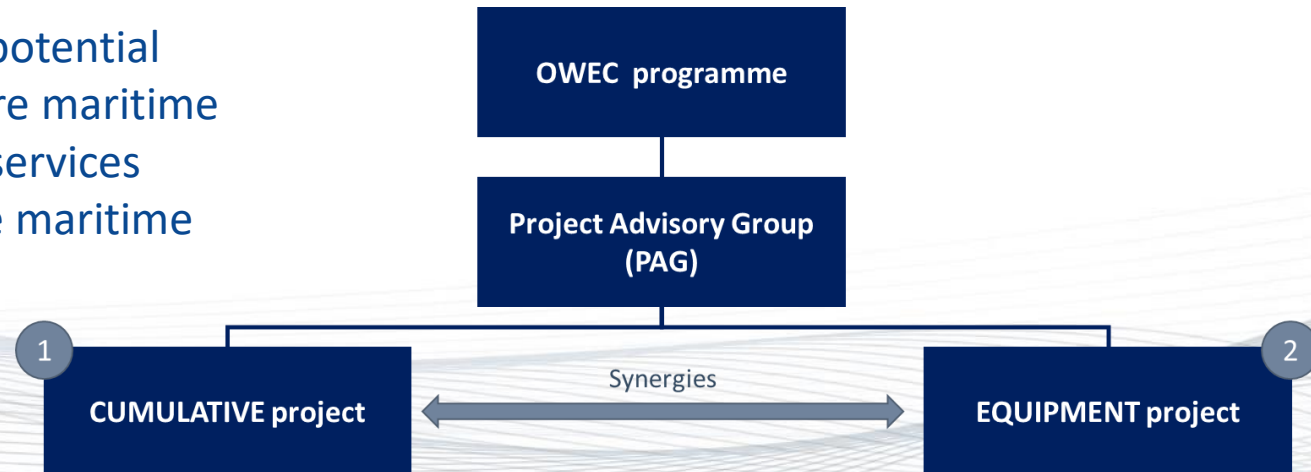
Assess the effects of turbine towers and blades on maritime navigation and communications technology – current and potential future

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



Lines of orientation for safe navigation & emergency response operations



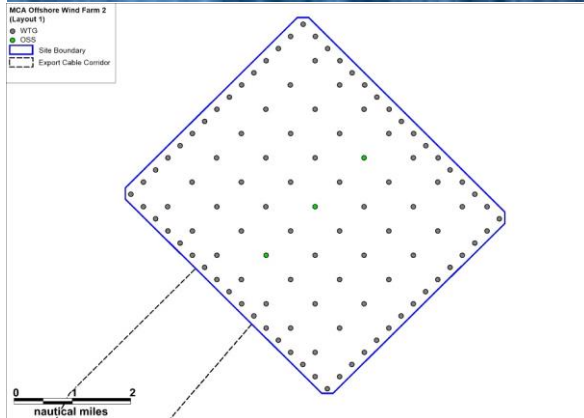
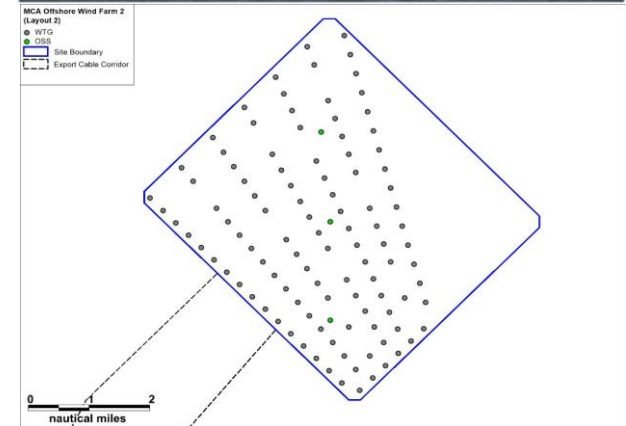
Maximise energy yield



Bridge and helicopter simulation trials  
Qualitative and quantitative data



Comparison of multiple lines v one  
Development of models  
Update of policy, guidance and best practice

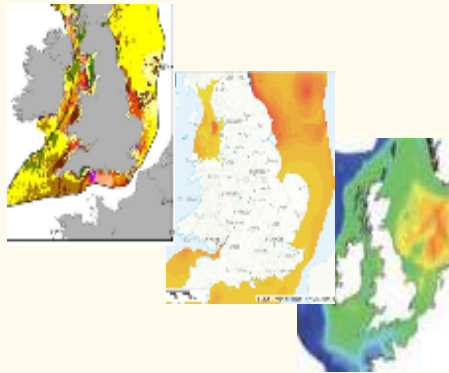


# POSEIDON (Planning Offshore Wind Strategic Environmental Impact DecisiONs)

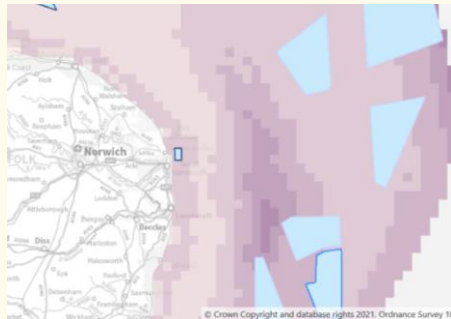
New  
baseline  
data



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

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# Next steps

## Evaluation and development of current proposals

1. Project Evaluation Board (PEB) review terms of reference
2. Project Advisory Groups (PAG) established to agree project scope & steer project
3. Submission of Funding Application by Lead Organisation
4. Announcement of Funding Awards
5. Execution of Funding Agreements
6. Project commencement expected 30 September 2021

## Future Funding Calls

Intermediate call

Range £50,000-£500,000

Project Outlines to be submitted by 31 July

Review of process -> continuous improvement -> updated guidance available





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# **Effective engagement with industry & Priorities for future project calls**



# OWIC Pathways to Growth (P2G) Workstream



## Purpose

-  To identify and consider changes to strategy and policy related to offshore wind deployment to realise the government's 2030 ambition of 40GW without prejudicing further deployment in line with 2050 net zero, and provide a coordinated approach to engage with government on this at all levels
-  To provide leadership, oversight and coordination to the offshore wind industry to identify and overcome strategic deployment issues in relation to all barriers to offshore wind with exception of aviation and grid, working with other relevant OWIC and RUK groups.
-  To ensure the challenges in consents and cumulative environmental impacts are being managed to overcome strategic issues.
-  To provide an escalation route via Executive Board with senior officials from BEIS/DEFRA/ Scottish Gov/Welsh Gov to raise issues and concerns to decision makers.

# Governance Structure

## The P2G Coordination Group:

- Has established a live list of strategic issues with a high potential to delay or prevent the achievement of the 40GW 2030 target for offshore wind;
- Maintains an overview of all the work in consents, licencing and the environment relating to P2G;
- Is responsible to OWIC for ensuring that there is a clear road map with commitments to meet the 2030 and net-zero targets; and
- Initiates new work efficiently through existing groups and bodies where gaps emerge or, if this is not possible, identify and drive the relevant means to address the gap.

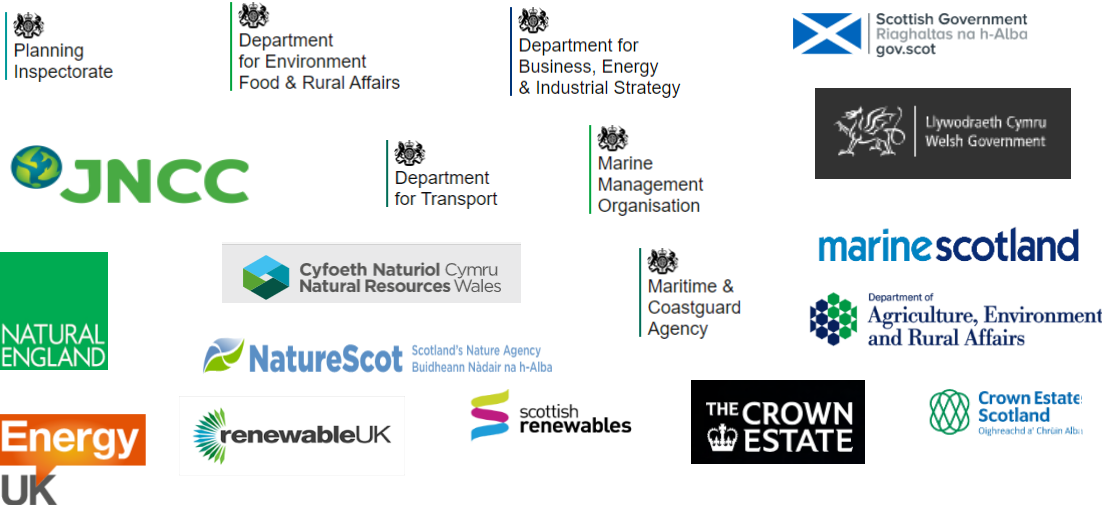
## Executive P2G Board - Offshore Wind

Chaired by Benjamin Sykes (OWIC)



## P2G Co-ordination Group - Offshore Wind

Chaired by Brian McFarlane (OWIC)



Plus offshore wind developer representatives



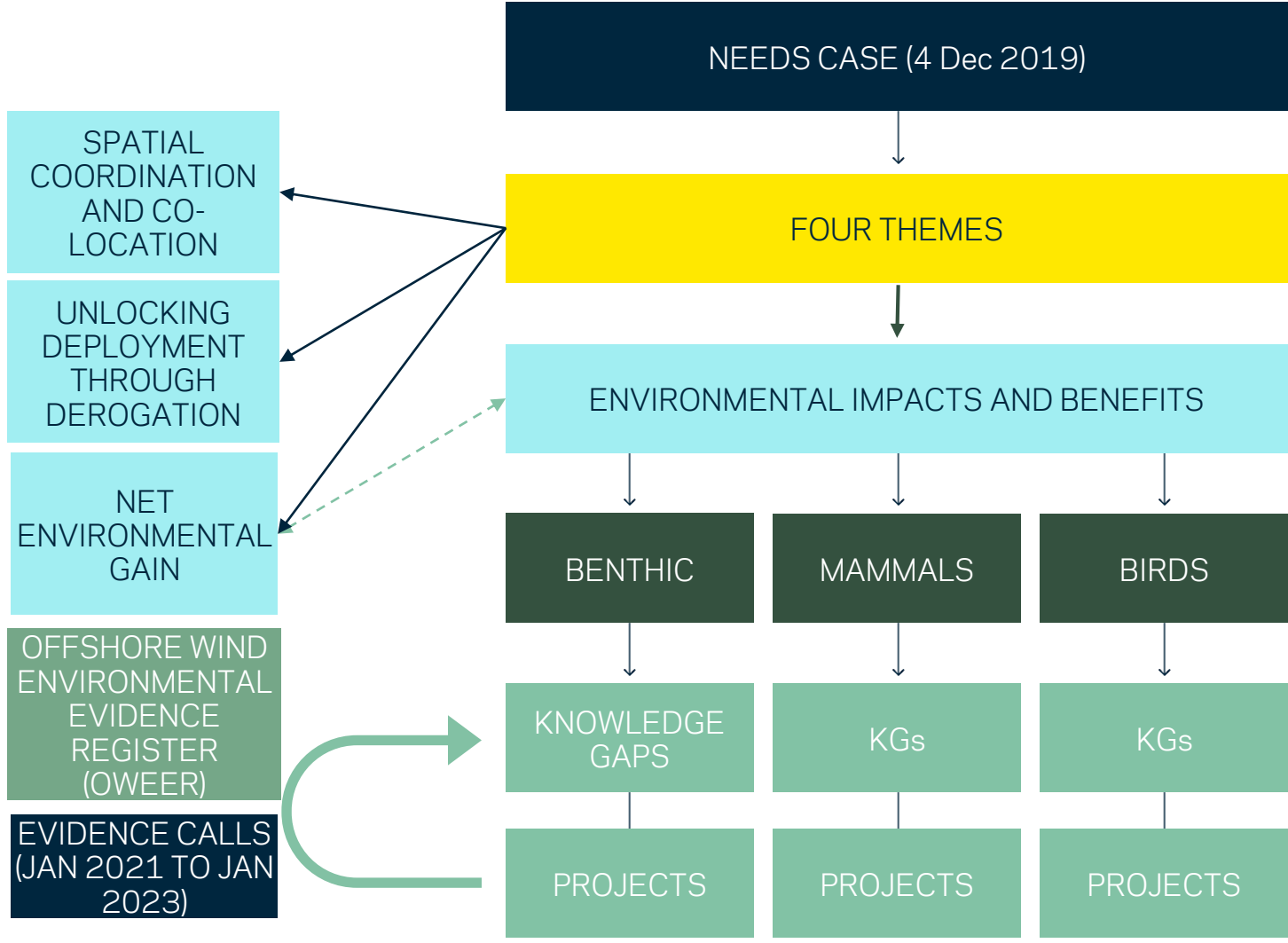
# OWIC Developer Group

- Brings together the consenting/permitting specialists from OWIC members to resolve issues relating to barriers to consenting, including informing and aligning the OWIC developer community priorities.
- Ensures that OWIC viewpoints on consents and cumulative environment impact to overcome strategic issues are considered in the relevant stakeholder groups, including the following:
  - the Sector Deal P2G Group
  - The Offshore Wind and Evidence Programme - provides developer ‘sounding board’ and input for the OWEC team and projects within the OWEC programme.

OWIC Developer Group role	TCE/OWEC role
<b>Inform OWEC ‘needs case’ and priorities</b> from an industry perspective (informed by project risks, escalation of issues)	Establish ‘needs case’ to meet Programme Mission through collaboration with all stakeholder groups
<b>Support OWEC project call assessments</b> – feedback on shortlisted projects prior to approval, inc. specific technical input to assessment	Deliver actions/mitigations against barriers/priorities
<b>Promote, secure funding and deliver relevant projects</b> through OWEC project calls	Support industry-led projects through match funding and raising profile of output to drive outcomes/change
<b>Support OWEC project delivery</b> – input to project steering group, access to sites (e.g. co-location)	

- Complements RenewableUK’s Offshore Consents & Licencing Group (OCLG) which has a broader industry membership drawn from RUK members.

# The Offshore Wind Evidence + Change Programme



**Priority Barriers to Address (OWIC)  
&  
Priority Environmental Evidence  
Needs (JNCC)**

# Agreed barriers to address

Priority (H/M/L)	Barrier description
High	<b>Coordinated approach</b> by Gov., Regulators, NGOs and developers to develop a road map to agree approach to derogations (alternatives, IROPI, compensation) considering regulatory policy and evidence base.
High	Solution to address <b>increased resource requirement</b> in wind farm consenting from DEFRA (Natural England, MMO), SNH, Marine Scotland, Natural Resources Wales, Marine Licencing Team Wales etc.
High	Improve the accuracy/uncertainty of <b>estimating cumulative impacts</b> on seabirds during both the construction and operational stages.
High	Resolution to issues on guidance on <b>underwater noise management</b> within harbour porpoise Special Areas of Conservation.
High	Strategic studies for <b>baseline characterisation and post consent monitoring</b> etc- with clear emphasis on improving the evidence base as a sector and ultimately leading to better applications.
High	Delay and uncertainty arising from <b>Review of Consents</b> process is alleviated
Medium	<b>Marine spatial planning</b> - with emphasis on clear decisions made on allocation of use of sea space and also feed into strategic considerations of issues and sea bed users.
Medium	To consider the advantage of offshore wind and <b>biodiversity</b> , i.e. where these are mutually supportive
Medium	Ensure <b>overarching policy</b> is conducive to OSW by influencing existing and future policy.
Medium	Review of <b>EIA process</b> to focus on significant impacts only to ensure that EIA is more proportionate.
Medium	Learning, evidence and new research is quickly adopted by decision makers.

# Environmental evidence priorities to inform future project calls: JNCC Report 675

Benthic	
Priority species/habitats:	Sandbanks which are slightly covered by sea water all the time; Reefs (biogenic, especially Sabellaria)
Priority evidence needs	Understanding the impact of introduced hard substrate (turbines, mattresses, rock dump) on the biological and ecological structure and functioning of designated sediment habitats in Marine Protected Areas (MPAs)
	Removal of introduced hard structure on the biological and ecological structure and functioning of designated sediment habitats in MPAs
	Understanding the magnitude of the biological and ecological impacts of introduced hard substrate into wider North Sea ecosystems
Marine mammals	
Priority species	Most of the research needs apply to marine mammal species as a whole but harbour porpoise is a priority
Priority evidence needs	Improved understanding of behavioural disturbance responses of key marine mammal species to offshore wind farm installation noise
	The development and evaluation of effective mitigation measures
	Characterisation of marine mammal species' distribution, abundance and habitat use

# Environmental evidence priorities to inform future project calls

Ornithology	
Priority species*	Atlantic puffin, black-legged kittiwake, common guillemot, great black-backed gull, lesser black-backed gull, razorbill, red-throated diver. In May 2020, as part of the OWSMRF process, SNCBs, Marine Scotland Science and Royal Society for the Protection of Birds (RSPB) identified kittiwake as the bird species posing greatest consent risk to offshore wind development
Priority evidence needs	Understanding the energetic and demographic consequences of displacement
	Understanding how bird behaviour changes in the vicinity of turbines
	Understanding the consequences of offshore wind development for prey distributions and knock-on effects to marine birds
	Obtaining an improved understanding of population dynamics and drivers of population change

\*Those species likely to trigger an adverse effect on a site’s integrity in the near future



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# Additional resources for assessing environmental evidence needs

The Offshore Wind Environmental Evidence Register (OWEER) will:

- List all evidence priorities for all receptor groups in a standard format, drawing on information from other sources, and with an applied prioritisation score
- List ongoing and recently completed research
- Be updated regularly
- Allow actors to better track and understand implications of evidence production, and focus future evidence projects
- Inform the Offshore Wind Evidence + Change call evaluation panel
- Provide context for the OWEER Annual Forum when exploring the possible operational impacts of advances in knowledge
- Register v1.0 is due for publication in early June 2021





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# Mobilising change





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# Mobilising change

- Strong focus on **outcomes** – products of **evidence** projects typically are just the beginning
- **Change** more difficult, but huge opportunity exists through current appetite, driven by ‘emergency’ momentum (ecological and net zero)
- However, **evolutionary** or the **transformational** change required ...

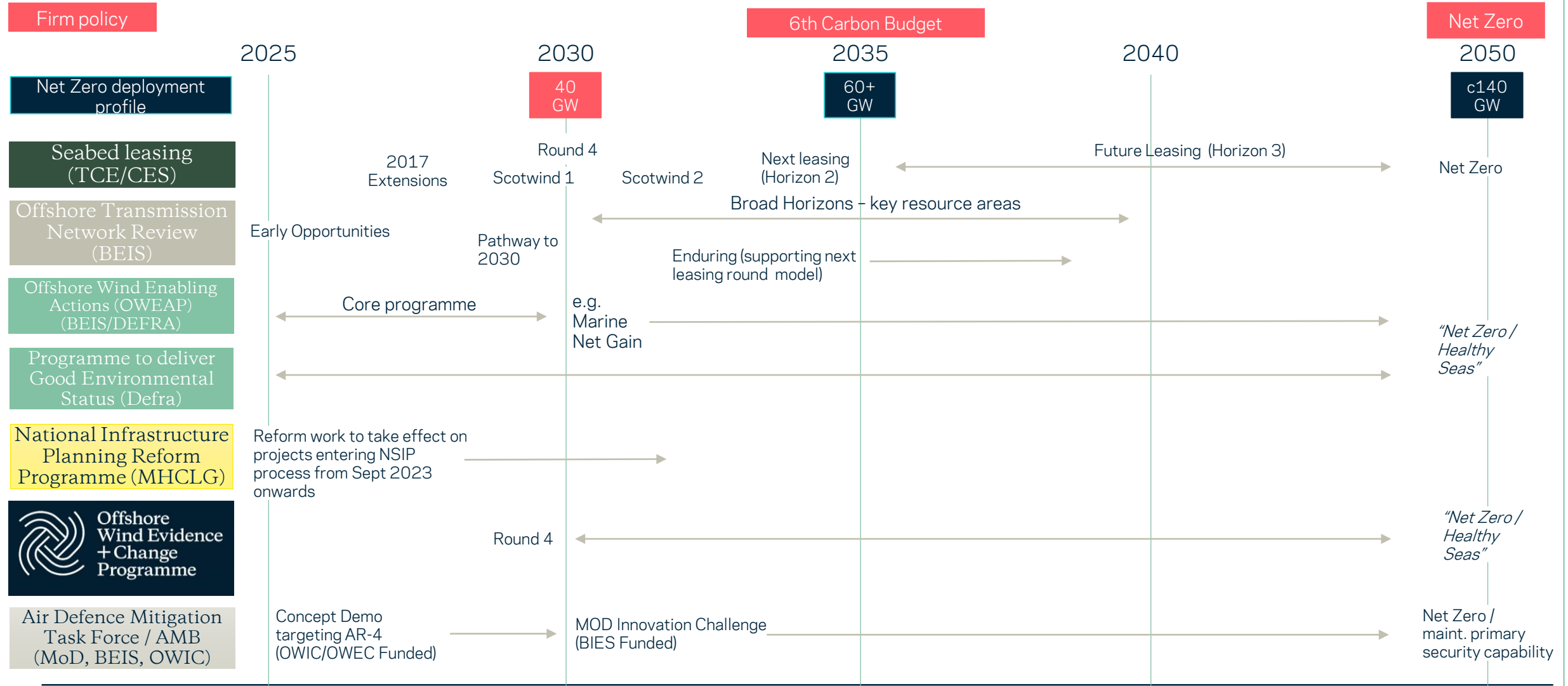
*...and this programme has been established to tackle*

## Our focus at the September PSG



***Vehicles for change***

# Vehicles for change - policy reform and strategic programmes\*



\*Future leasing timescales on this slide are not exact and are for illustrative purposes only.

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## How are we all doing our part to effect change ... ?



... we will challenge this in September PSG.

Alongside, initial outputs of Future Offshore Wind Scenarios Project  
Meanwhile, OWEC communication and projects

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