



# Navigating to 2050

A safe and sustainable maritime future

#NavigatingTo2050



## Adam Cronin

Head of Offshore

DP Energy Ireland Ltd



Commissioners of  
**IRISH LIGHTS**

Navigation  
and Maritime  
Services

# A Developers Perspective on the Maritime Safety Aspects of Offshore Renewable Energy Development



DP ENERGY

Navigating to 2050  
Commissioners of Irish Lights

16 November 2022

Adam Cronin – Head of Offshore

- **Irish based Renewable Energy developer**
- **Head-quartered in Cork**
- **Develops onshore and offshore wind, solar and storage projects across Ireland, Australia, Canada, the UK and new markets**
- **Leading role in the Irish wind industry since 1993**
- **1 GW developed**
- **750MW at late stage development**
- **7GW pipeline (Offshore & Onshore)**





## Based in Cork, Ireland - Operating Globally

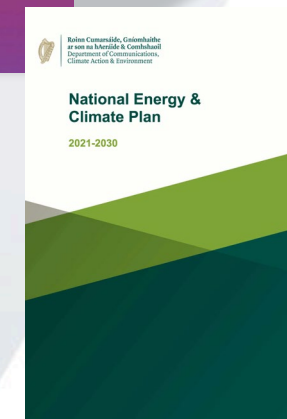
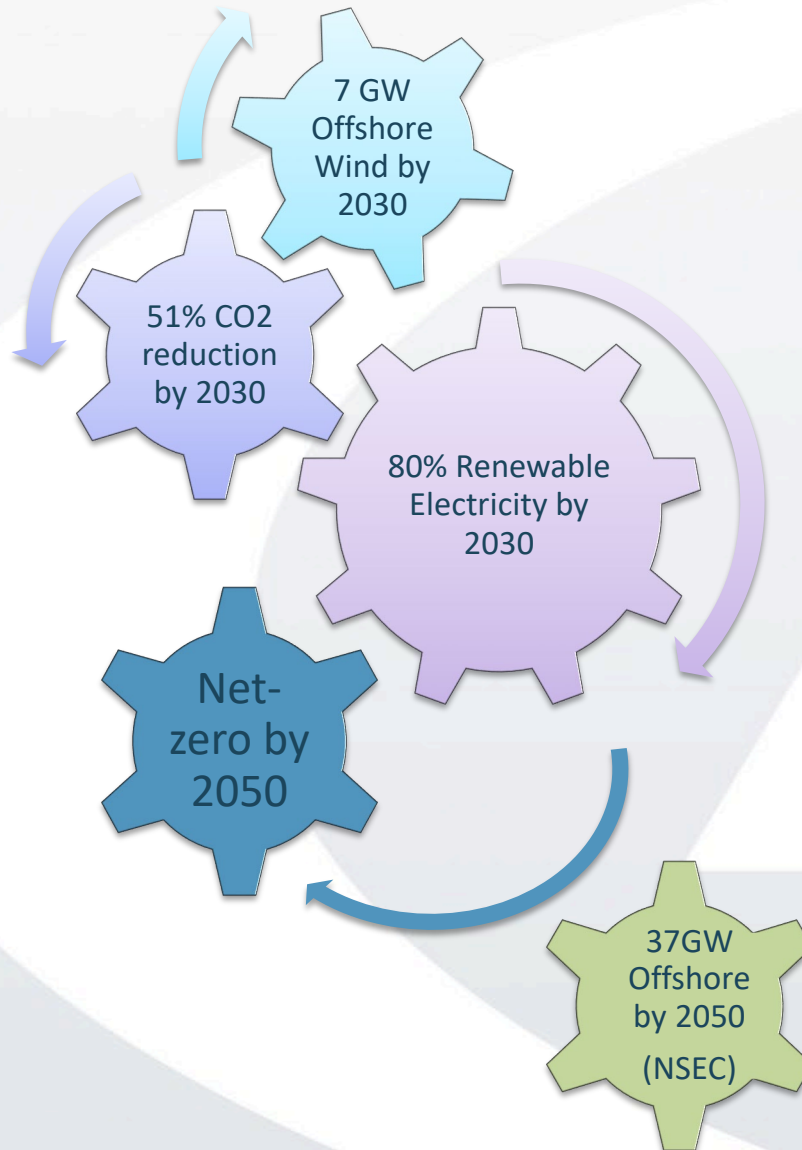


**7000 +MW**  
**Global Project Portfolio**  
**5**  
**Offices Worldwide**  
**30+**  
**Years Experience**

# Irish Offshore Projects



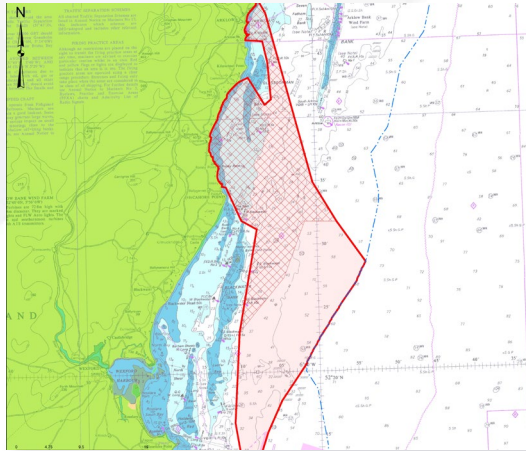
# Drivers



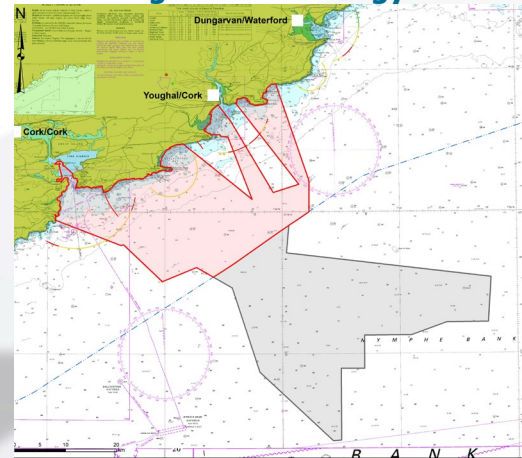


# Irish Offshore Projects - Status

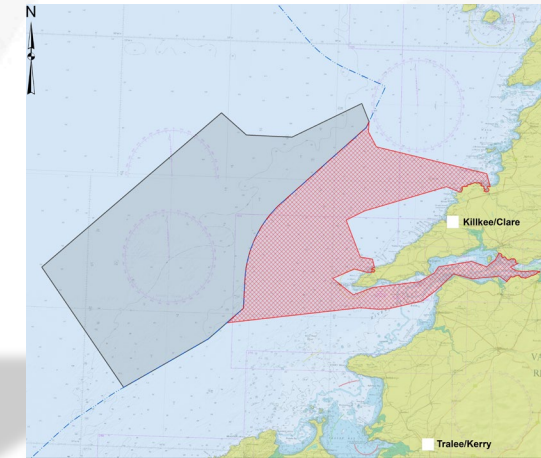
**Shelmalere Offshore Wind Farm**



**Inis Ealga Marine Energy Park**

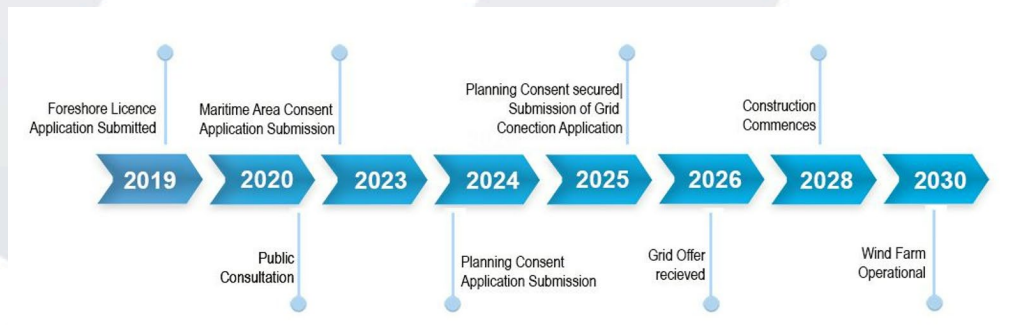


**Clarus Offshore Wind Farm**



## Current Development Status

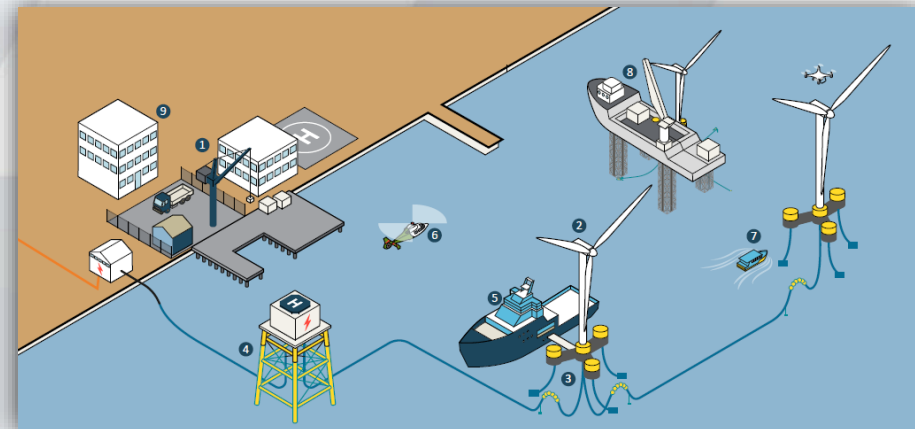
- Foreshore licences at final consultation
- Aerial bird and mammal surveys underway
- Landside ecology surveys
- Grid & cable studies
- Baseline array design
- Engineering studies
- EIAR ongoing
- Stakeholder engagement
- Supply chain engagement
- Land acquisition



## Irish Offshore Projects – Technology & Navigation

### Offshore wave & tidal

- Future potential in Ireland
- Tidal on west and north coasts
- Closer spacing/density than wind turbines
- Low visibility
- Under-keel clearance
- High tidal flow areas



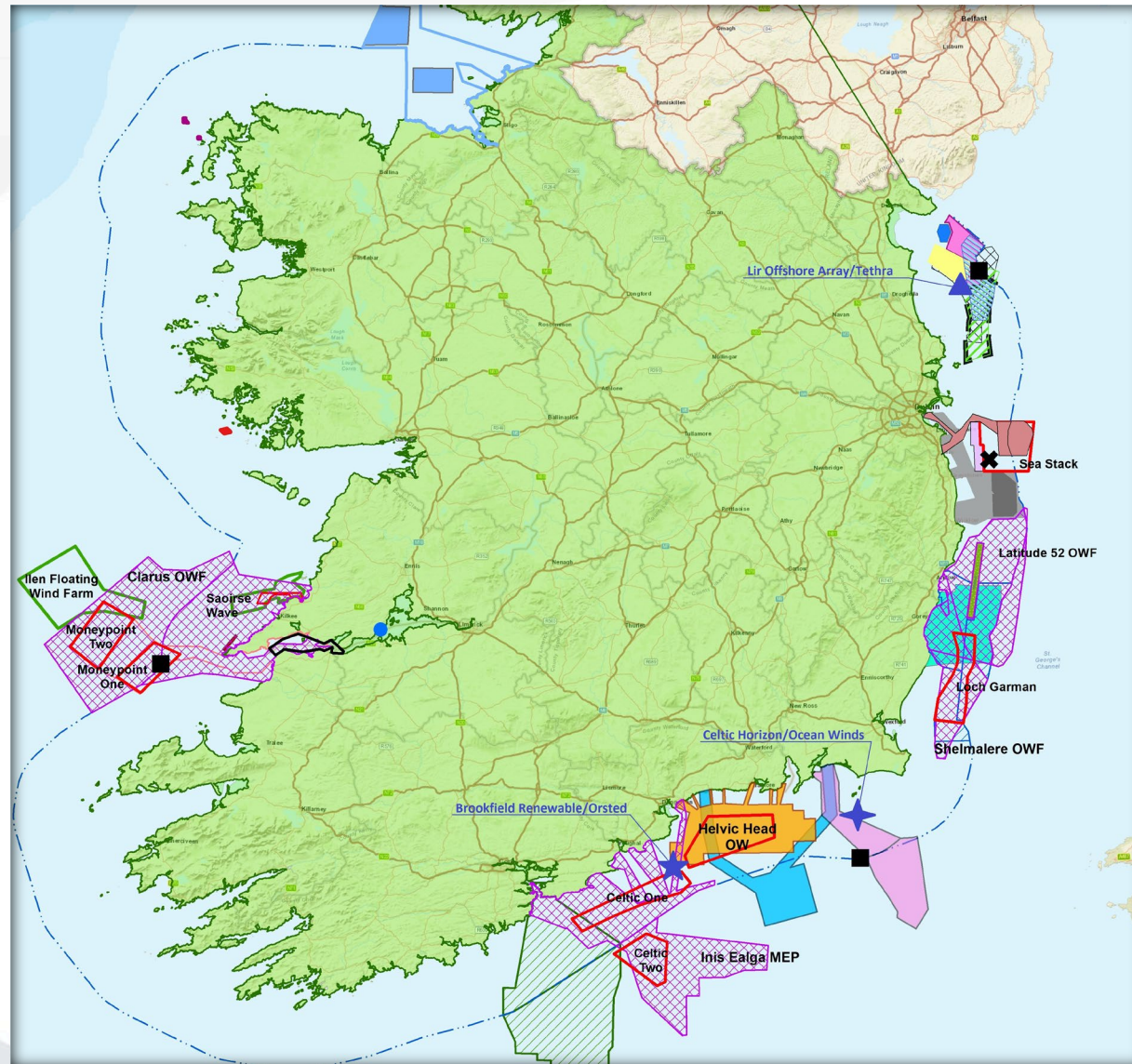


## SHIPPING & NAVIGATION

- A key workstream in the project design process
- Bridges both engineering design and environmental assessment processes
- Surface, sub-surface & air
- Radar, visual, lighting
- Navigation authorities and mariners-key stakeholders
- Navigation Risk Assessment (NRA)
- EIAR
- Policies & guidelines

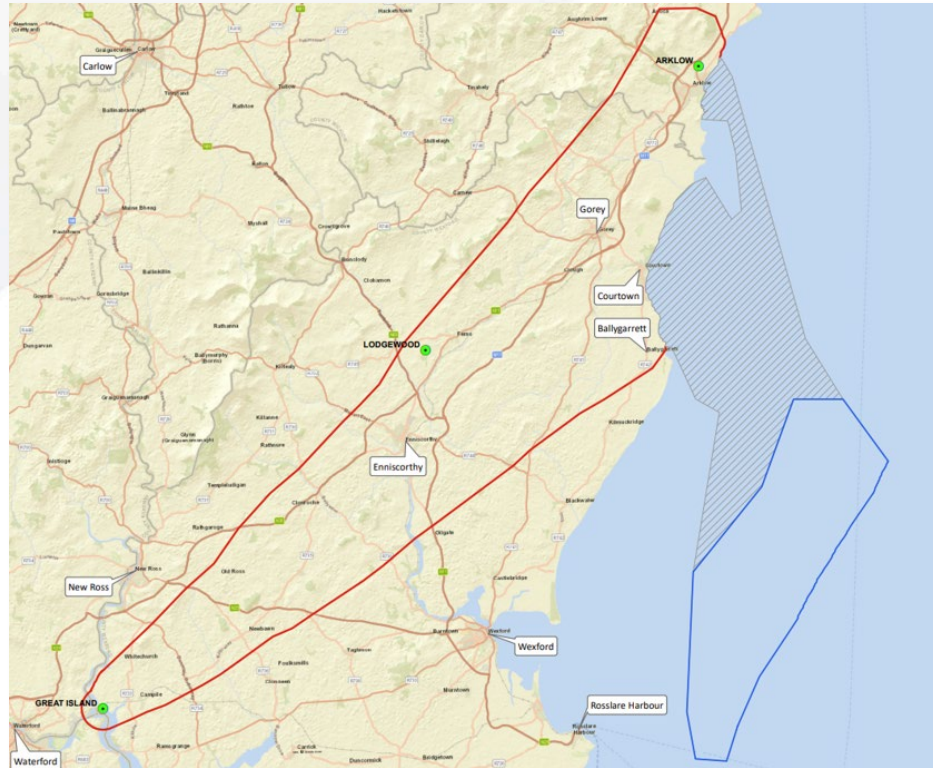


# SHIPPING & NAVIGATION – ORE IRELAND





## SHIPPING & NAVIGATION - EIAR



### Consultants/Advisors

NASH Maritime  
MMCC Port Marine

### EIAR Process

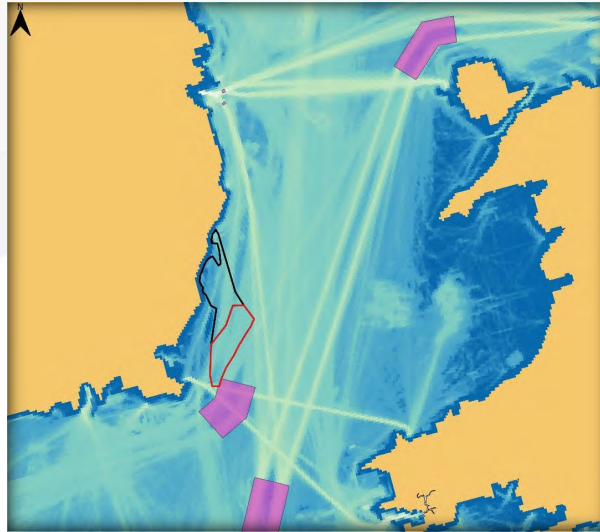
- Policy & guidance review
- Review of receiving environment
- Assessment of impacts on shipping & navigation
- Stakeholder identification and liaison
- Source key data sets
- Design and implement surveys
- Develop impacts summary and avoidance/mitigation strategy
- NRA



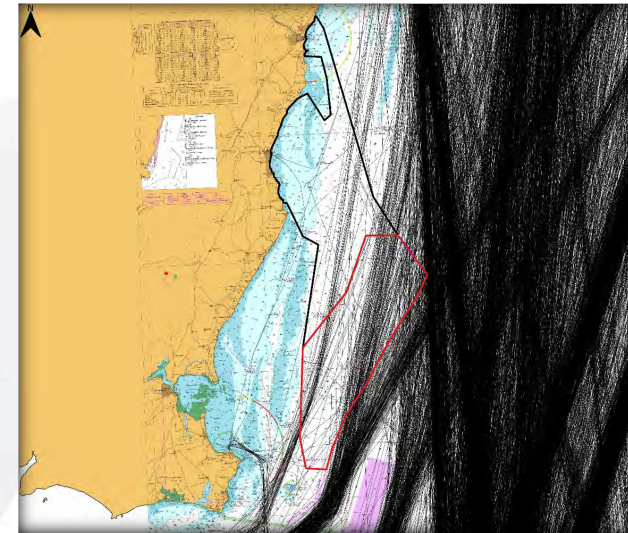
## SHIPPING & NAVIGATION – POLICY & GUIDANCE

Policy / Guidance	Reference	Geographic Coverage
<b>Policy</b>		
National Marine Planning Framework (NMPF)	DHLGH, 2021	Ireland
Offshore Renewable Energy Development Plan (OREDPA)	DCCAE, 2014	Ireland
<b>Guidance</b>		
Guidance on EIS and NIS Preparation for Offshore Renewable Energy Projects	DCCAE, 2017	Ireland
MGN 654 Guidance on “UK Navigational Practice, Safety and Emergency Response Issues”. Annex 1: Methodology for Assessing Marine Navigational Safety Risks of Offshore Wind Farms. Annex 5: Search and Rescue, Maritime Assistance Service, Counter Pollution and Salvage Incident Response.	Maritime and Coastguard Agency (MCA), 2021	UK
MGN 372 “Guidance to Mariners Operating in the Vicinity of UK OREIs”.	MCA, 2008	UK
International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) G1162 the Marking of Man-Made Offshore Structures.	IALA, 2021	International
International Maritime Organisation (IMO) Formal Safety Assessment.	IMO, 2018	International
Royal Yachting Association (RYA) Position on Offshore Energy Developments.	RYA, 2019	UK
European Boating Association (EBA) Position Statement, Offshore Wind Farms.	EBA, 2019	International
The Shipping Industry and Marine Spatial Planning.	Nautical Institute, 2013	International

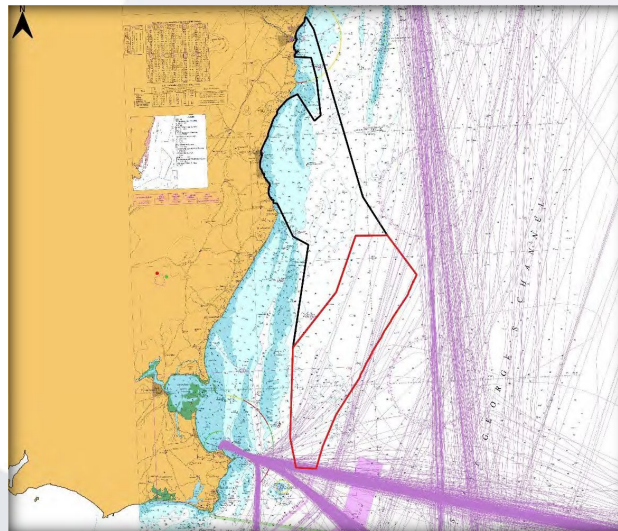
## SHIPPING & NAVIGATION – RECEPTORS & IMPACTS



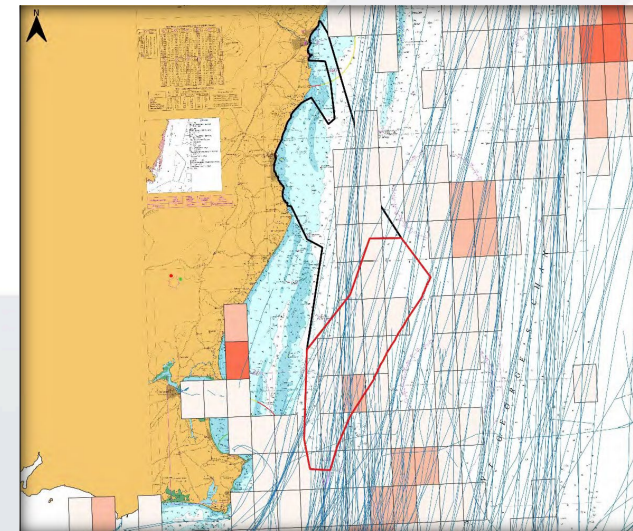
Vessel Traffic Overview (AIS)



Commercial Shipping Transits (AIS)



Passenger & Ferry Transits (AIS)



Fishing Tracks & Intensity (AIS/VMS)



## SHIPPING & NAVIGATION – POTENTIAL RISKS/EFFECTS

- Displacement of shipping
- Decreased trade/supply
- Interference with sea lanes (international navigation)
- Reduced visibility
- Increased collision risk (vessels & infrastructure)
- Increased grounding risk
- Reduction in SAR capability
- Interference with radar, communications & positioning systems
- Cumulative effects
- Transboundary effects





## SHIPPING & NAVIGATION – STAKEHOLDERS

Proposed Consultee	Objective of Consultation
Marine Survey Office	<ol style="list-style-type: none"><li>1. Review NRA methodology and assessment approach.</li><li>2. Discuss potential effects of Shelmalere Offshore Wind Farm on navigation safety.</li><li>3. Review possible risk control options.</li></ol>
Commissioner of Irish Lights	<ol style="list-style-type: none"><li>1. Discuss navigational routeing through the Shipping and Navigation Topic-specific Study Area.</li><li>2. Review possible risk control controls including marking and lighting requirements.</li></ol>
SAR providers (Irish Coast Guard, Royal National Lifeboat Institute)	<ol style="list-style-type: none"><li>1. Discuss historical incidents in the Shipping and Navigation Topic-specific Study Area.</li><li>2. Discuss possible impacts of Shelmalere Offshore Wind Farm on SAR capabilities.</li></ol>
Ports and Harbours (Rosslare Europort, Wexford, Courtown, Arklow, etc.).	<ol style="list-style-type: none"><li>1. Review operations including constraints on navigating into relevant ports and harbours.</li><li>2. Discuss potential impacts of Shelmalere Offshore Wind Farm on vessel access into ports.</li></ol>
Ferry Companies (Stena Line, Irish Ferries and Brittany Ferries).	<ol style="list-style-type: none"><li>1. Review ferry routeing through Shipping and Navigation Topic-specific Study Area, including in adverse weather.</li><li>2. Discuss potential impacts of Shelmalere Offshore Wind Farm on ferry safety and commercial operations (e.g. timetables).</li></ol>
Recreational User Groups (Irish Sailing, Irish Cruising Club, Irish Cruising Association etc.).	<ol style="list-style-type: none"><li>1. Establish types, magnitude, seasonality of recreational activity through Shipping and Navigation Topic-specific Study Area.</li><li>2. Discuss potential impacts of Shelmalere Offshore Wind Farm on recreational activities.</li></ol>
Fishing Representatives	<ol style="list-style-type: none"><li>1. Establish types, magnitude, seasonality of fishing activity within the Shipping and Navigation Topic-specific Study Area.</li><li>2. Discuss potential impacts of Shelmalere Offshore Wind Farm on fishing activities.</li></ol>

## SHIPPING & NAVIGATION – ONGOING WORKSTREAMS

### Data Collection

- AIS & VMS
- Cruising routes
- Nautical charts
- Sailing directions
- Historical accident data
- Stakeholder feedback

### Surveys

- Vessel traffic surveys
- AIS, radar and visual observations
- 2 seasons. 14 days each survey

### NRA

- MGN654
- Receptors highlighted in OREDP & NMPF
- Construction, O&M, decommissioning

### Avoidance, Reduction, Mitigation

- Array design informed by NRA and EIAR processes
- Circular design

## SHIPPING & NAVIGATION – DP ENERGY’S APPROACH

- We believe that offshore renewable energy projects can co-exist with shipping and navigation
- Adhere to and exceed, where practicable, recognised National, European and International policies and guidelines
- Liaise extensively with all relevant navigation/shipping stakeholders
- Develop a hierarchical mitigation strategy of Avoidance, Reduction, Remedy
- Work with Irish authorities and industry to develop national guidance on NRA’s
- Integrate experience from other countries and projects



Leading developers of renewable energy projects,  
head-quartered in Cork, operating across the  
world



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