

Shannon Estuary

A Plan (and planner) led approach to
Opportunities for Sustainable Development

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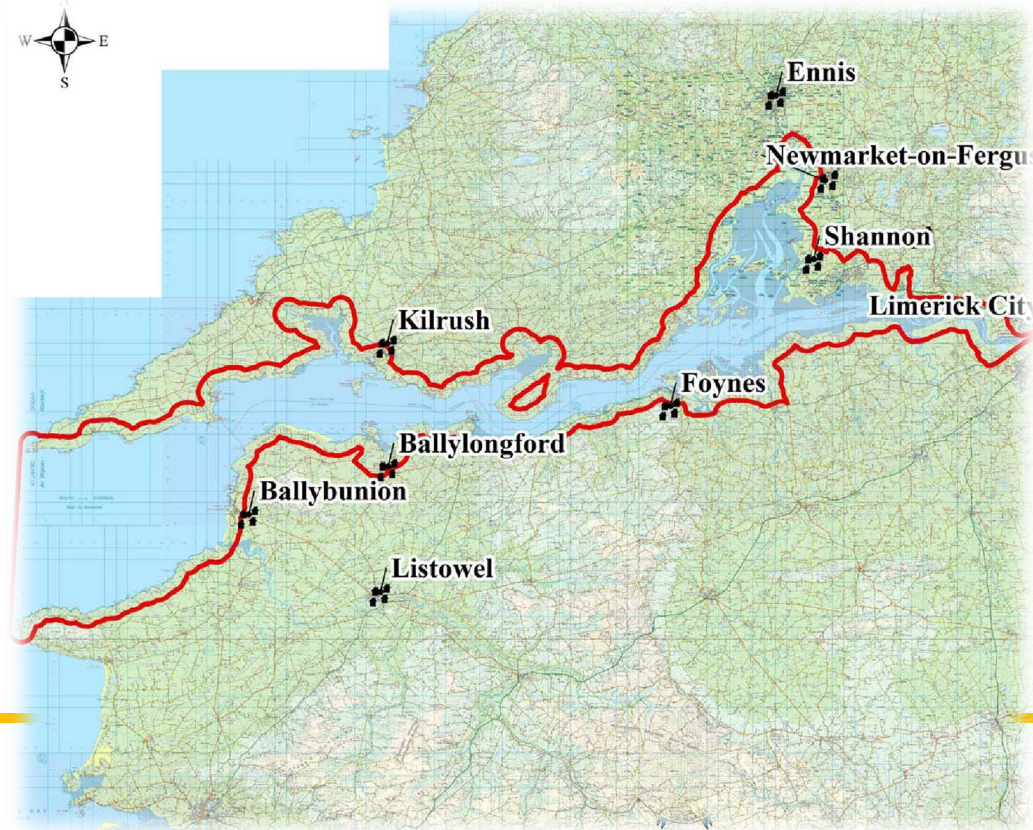
1st December, 2023



COMHAIRLE CONTAE AN CHLÁIR
CLARE COUNTY COUNCIL

The Shannon Estuary

- 100km Limerick City to Loop Head
- over 500km² of deep sheltered water facing out into the vast Atlantic Ocean
- proximity to some of the world's best wind resources, primarily off the Atlantic seaboard;
- natural sheltered waters sufficiently deep to facilitate floating offshore wind installation at scale; largest shipping lanes
- extensive land suitable for industrial development
- Network of City, Towns, Villages along the estuary
- Designated SPA, adjoining SAC's
- Along the WAW – Key tourism locations
- Resident population of Bottlenose Dolphins and other Annex 1 Species





Key Economic Drivers

Shipping and Navigation

- Key national economic driver accounting for 99% of Ireland's international trade.
- Tier 1 Port (Foynes Port) at the heart of the navigation channel.
- Availability of sheltered natural deep-water pockets which are a major asset, providing significant opportunities.

Harnessing the Energy Resource

- The Shannon Estuary is a long-established major contributor to the national energy supply market.
- Three sites within the Estuary that are of strategic significance in national and regional terms.
- Contribute to the Government objectives in providing security and diversity of energy supply

Promoting Tourism around the Shannon Estuary

- Marketable tourist asset with a considerable range of attractions in terms of the scale and variety of the offer.
- 1,400kms of the Wild Atlantic Way
- Bunratty Castle, Loophead Lighthouse, Ballybunion, Foynes
- Eco Tourism – Bottlenose Dolphin, Rib tours, Scatterry Island

Key Economic & Environmental Drivers

Aviation

- Shannon International Airport at the heart of the Shannon Region.
- Key driver for economic, tourism and industrial development for the Shannon Region and the greater West of Ireland.
- Sustainable development of lands for MRO – Maintenance, Repair and Overhaul together with logistics

Commercial Fishing & Aquaculture

- Range of commercial fishing activities within the Shannon Estuary.
- Widely acknowledged that there is the potential to expand the commercial fishing and aquaculture industries within the Shannon Estuary.
- Can contribute to the diversification of the local economy, growth in employment.

Environmental Assets & Constraints

- Unique ecosystem
- International significance
- Most important estuarine site in Ireland
- Opportunities for river and sea excursions
- Resident group of Bottlenose Dolphins
- Real world classroom for environmental studies



Subject of Many Reports & Studies

Title of Report or Study	Date Study completed	Commissioned by/ Author
Report & Advisory outline plan for the Limerick Region	1967	Nathaniel Lichfield & Associates
The potential for transshipment on the Shannon Estuary to Limerick Harbour Commissioners	1968	Arthur D Little Limited
The Shannon Estuary – Sites for Comprehensive Industrial Development	1972	Limerick, Clare & Tipperary (N.R) Regional Development Organisation
The Shannon Estuary – An Outline Development Framework 1974	1974	Shannon Development
The Shannon Estuary Industrial Location Study – 1982 (4 volumes)	1982	An Foras Forbartha
Shannon Estuary Development	1989	Shannon Development
Shannon Estuary Tourism	1989	Shannon Development
The Shannon Estuary, Project Team, Development Programme, 1994-1999	1994	Shannon Development
Shannon Estuary Bulk Commodities Shipping & Industry Study 1995	1995	Shannon Development
Shannon Estuary Development	1998	Shannon Development
Aquaculture Potential of the Shannon Estuary	1998	Shannon Development, Bord Iascaigh Mhara
Shannon Estuary – Integrated Coastal Zone Management (ICZM), Definition of issues	2002	Shannon Development

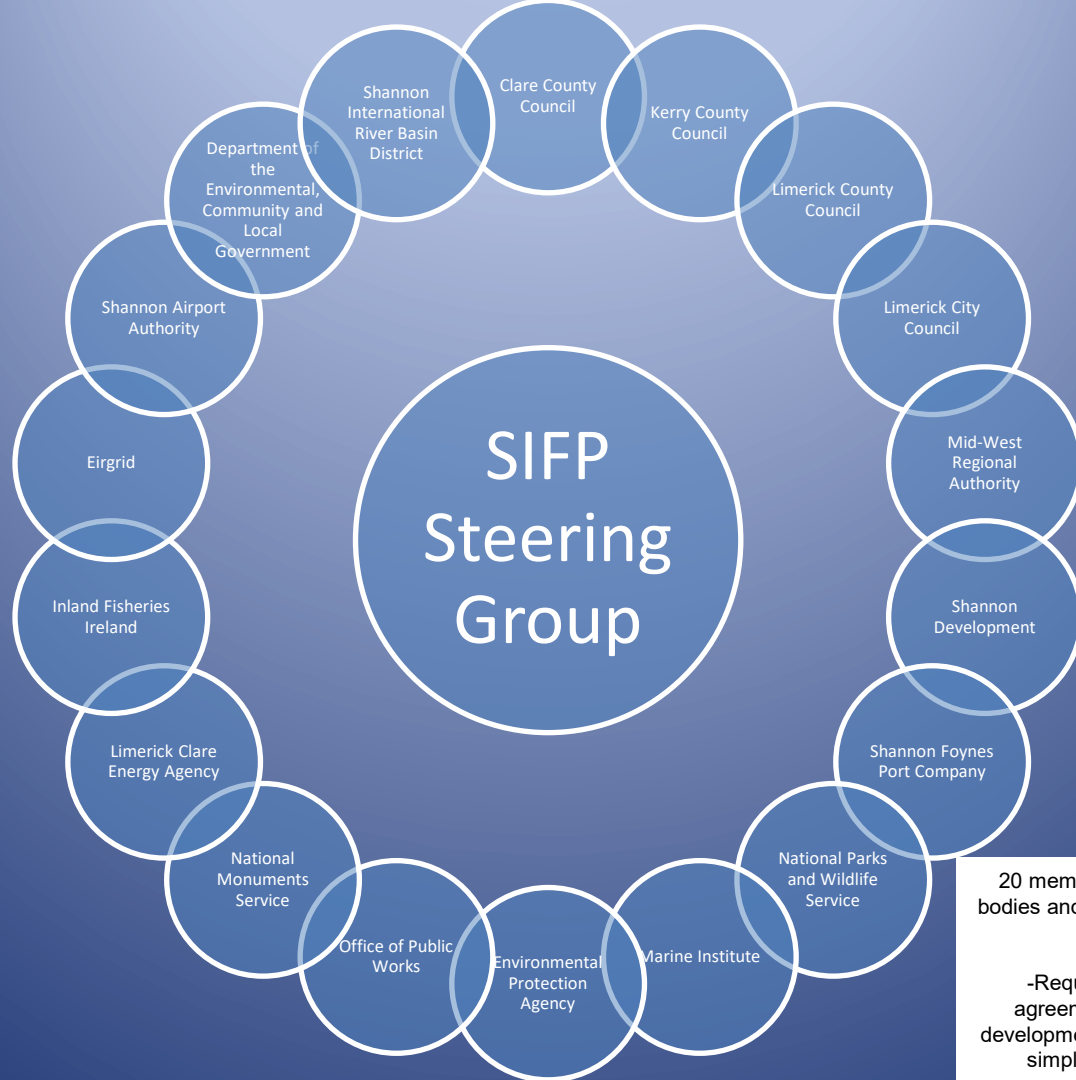
County Clare

- Focus of Land-use Policy pre-2011 on
- The Burren
- Ennis
- Shannon Airport
- Lough Derg
- Atlantic Coastline
- Settlements
- Wind Energy
- Rural Housing
- Managing Development Growth
- Infrastructure



The Shannon Estuary – The need for an integrated approach





SIFP Steering Group

20 members including statutory and non statutory bodies and key stakeholders presented a challenge in itself

-Required significant levels of collaboration, agreement and working towards the economic development of the estuary as a whole instead of just simply one local or statutory authority remit.

SIFP for the Shannon Estuary

- Inter-jurisdictional marine based framework to guide the future potential development of the Shannon Estuary in a sustainable manner.
- First of its kind in Ireland
- Demonstrates regional commitment to sustainable development and to the realisation of the objectives through the zoning of Marine Related Industry sites across the estuary and in not only in compliance with, but lead by AA and Strategic Environmental Assessment considerations

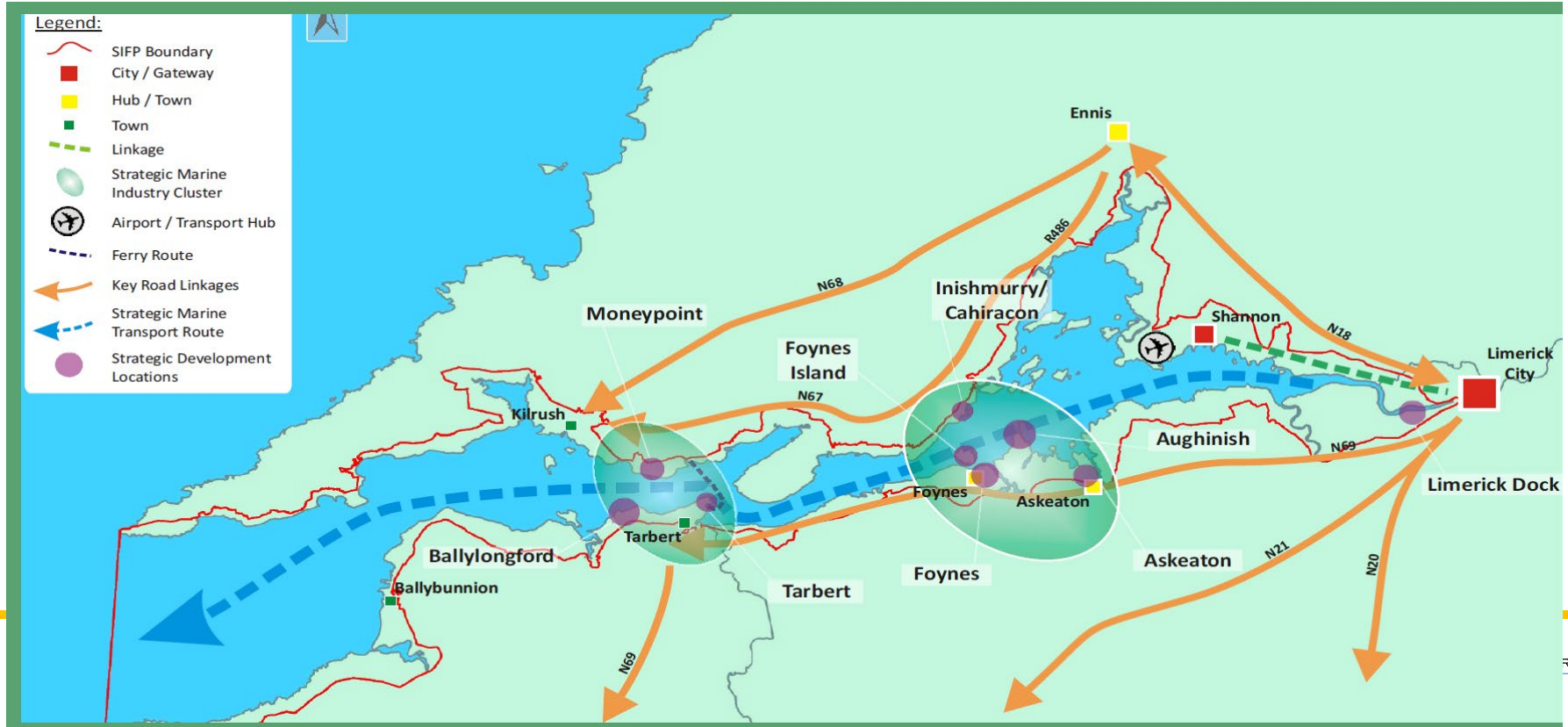


Strategic Integrated Framework Plan
for the Shannon Estuary



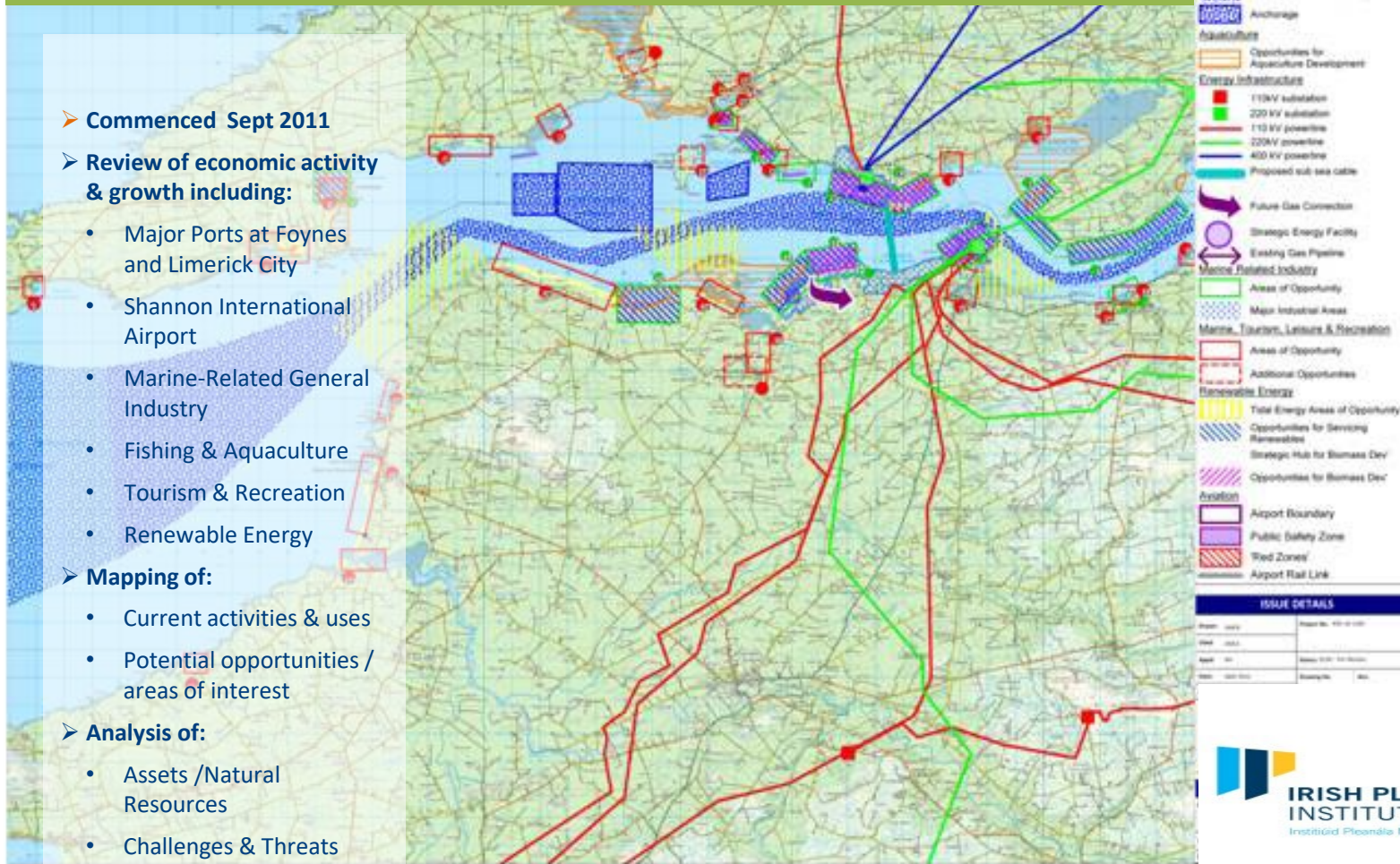
Institiúid Pleanála Na hÉireann

Manage Infrastructural and Natural Assets



Strategic Integrated Framework Plan

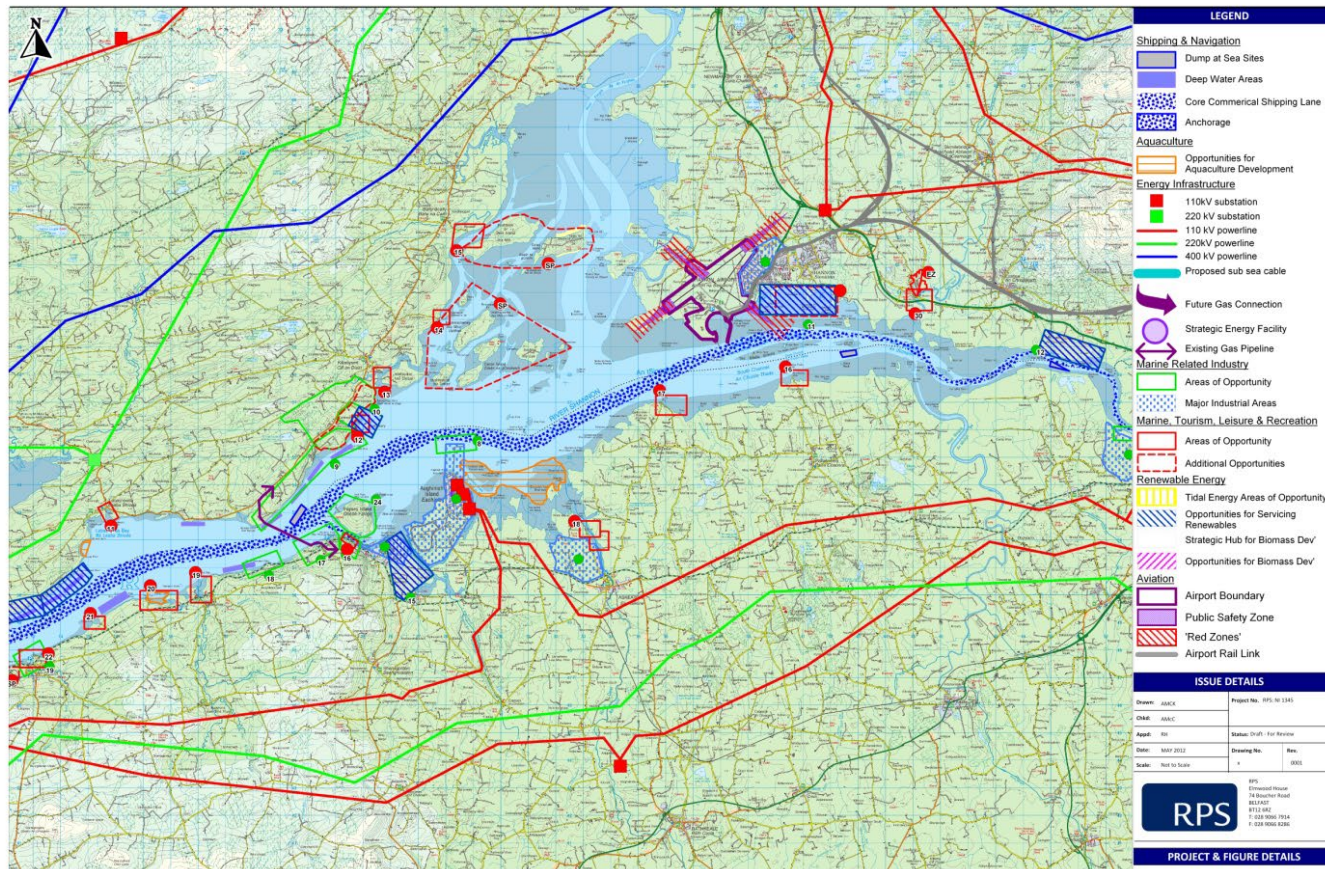
- **Commenced Sept 2011**
- **Review of economic activity & growth including:**
 - Major Ports at Foynes and Limerick City
 - Shannon International Airport
 - Marine-Related General Industry
 - Fishing & Aquaculture
 - Tourism & Recreation
 - Renewable Energy
- **Mapping of:**
 - Current activities & uses
 - Potential opportunities / areas of interest
- **Analysis of:**
 - Assets /Natural Resources
 - Challenges & Threats

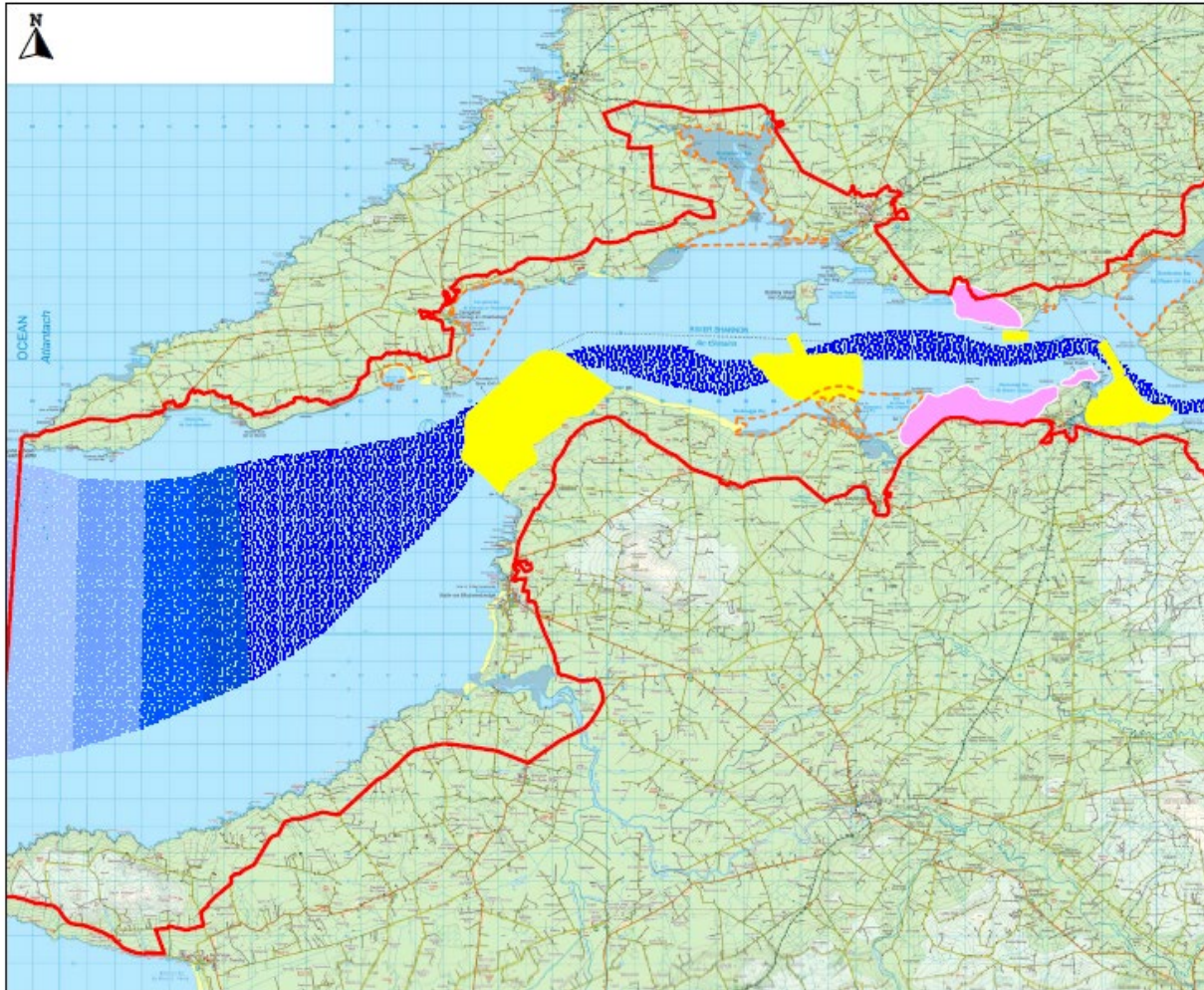


How to sustainably develop this....

But while taking into account all of these competing considerations.....

- Retaining the primacy of the LimerickShannon Gateway & Zone 1 in the NSS
- Biodiversity, Flora & Fauna
- Human Health
- Soil
- Water
- Air
- Landscape Cultural
- Archaeological & Architectural heritage
- Existing infrastructure
- Innovation – e.g. Transhipment





LEGEND	
	SIFP Study Area
	Core Commercial Shipping Lane
	Anchorage
	Airport Boundary
	Areas of Opportunity for Tidal Energy
	Areas of Opportunity for Aquaculture
	Strategic Development Locations

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ISSUE DETAILS

Drawn: JAC	Approved: JAC
Check: JAC	Issue: Final
Scale: 50	Date: July 2023
Author: Ben W. Deane	Drawing No: S.I.A.
	Rev: 0001

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PROJECT & FIGURE DETAILS

Project Title:	Shannon SIFP
Figure Title:	Composite Drawing
Figure Number:	Figure S.I.A.

Areas of Opportunity for Tidal Energy...



Tarbert Bay



Moneypoint



Carrig Island



Kilconly Point

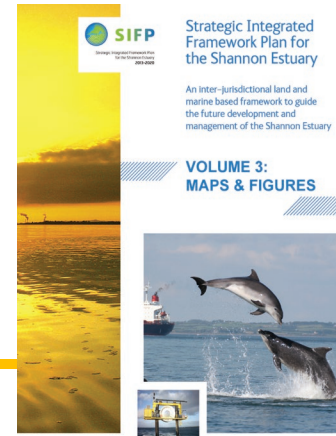
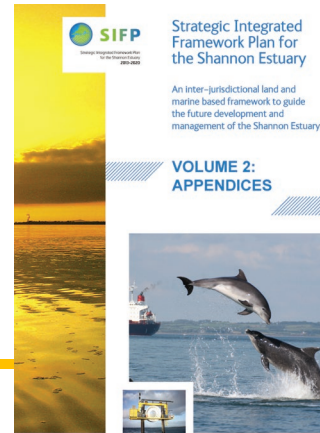


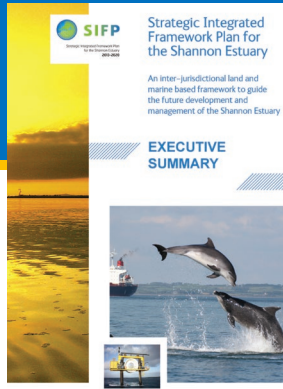
Final SIFP

❑ Strategic level approach incorporating;

- ❖ Objective-Led Policies;
- ❖ Identification of Strategic Development Locations (SDLs) & Areas of Opportunity.

❑ SIFP incorporates 3 Volumes....





□ An Executive Summary....

□and the Environmental Assessments (SEA & AA) as supporting documents



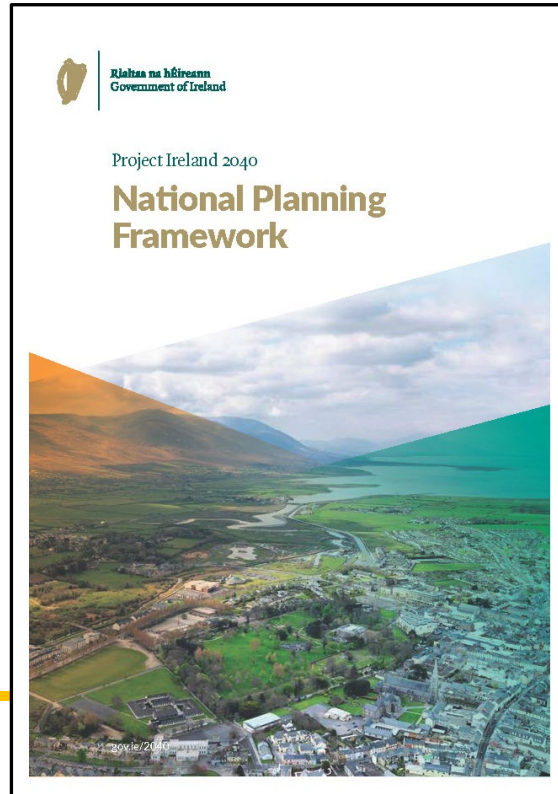
Shannon Estuary – Plan (and planner) led Implementation

- SIFP Plan Implementation - Marketing & Environmental
- Shape and influence National and Regional Policy
- Shannon Estuary Task Force
- Research & Data Gathering
- Project Delivery
- Economic Investment - Clare MEZ D.A.C.
- Data Gathering
- Renewable Test Sites
- Sustainable Cruise
- Off-shore renewable Energy
- Maritime Training



National Planning Framework – SIFP for Shannon Estuary – Best Practice

The Shannon Estuary and the Strategic Integrated Framework Plan is used as a Case Study in the NPF.



CASE STUDY



Shannon Estuary: Strategic Integrated Framework Plan

The Shannon Estuary forms the largest estuarine complex in Ireland, covering an area of 500km² of navigable water and extending for 100km from Limerick City to Loop Head in County Clare.

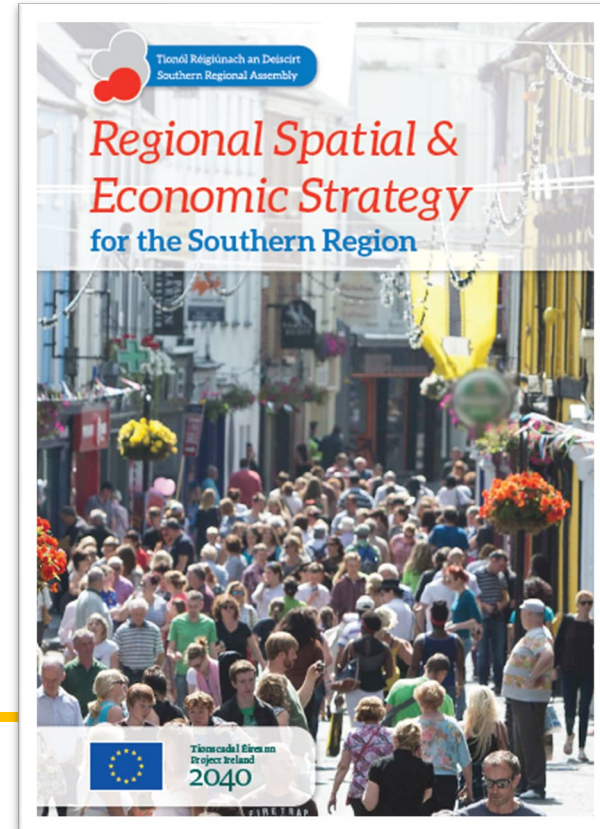
As a deepwater port, the Shannon Estuary routinely caters for ships up to 200,000 deadweight tonnes. It serves a number of large industrial bulk installations and Shannon Airport has a dedicated fuel terminal. The port of Foynes is located in the southern part of the Estuary, with Limerick city located further to the east.

The Strategic Integrated Framework Plan for the Shannon Estuary was published in November 2013. As an inter-jurisdictional land and marine based plan, it was the outcome of a successful multi-agency collaboration that included Limerick City and County Council, Clare County Council, Kerry County Council, Shannon Development and the Shannon Foynes Port Company as well as other key stakeholders with an interest in the Estuary.

Regional Spatial and Economic Strategy for the Southern Region

“The RSES recognises the national and international importance of the Shannon Estuary, its potential to attract multinational developments and the significant work that has been undertaken to progress its promotion and development.

It is an objective to support and promote the delivery of the Strategic Development Locations as set out in the **SIFP for the Shannon Estuary** and zoned in the Clare County Development Plans.”



Regional Enterprise Plan to 2024

Key national strategic transport corridor and a natural deepwater resource which routinely hosts the largest vessels entering Irish waters.

The estuary is recognised as a significant economic driver in the region with strong economic and development policies focused on growing its potential within the Regional Enterprise Plan to 2024 (Mid-West)



Programme for Government

“As part of this, we will consider the potential of the Shannon Estuary in terms of regional economic development across transport and logistics, manufacturing, renewable energy and tourism, and develop a strategy to achieve this potential, with support from the Exchequer”

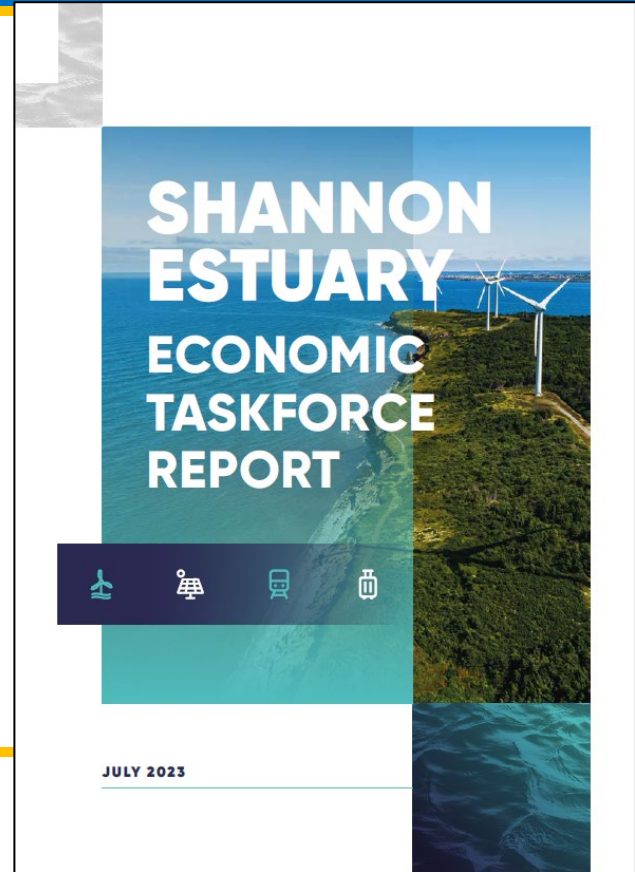
p36, *Programme for Government: Our Shared Future*, 2020

Programme for Government

Our Shared Future

Shannon Estuary Taskforce

- The independent Shannon Estuary Economic Taskforce was established in April 2022 to make recommendations to government on the economic development potential of the Shannon Estuary region.
- The Taskforce's Final Report sets out recommendations for the delivery of up to 30GW of Atlantic Offshore Wind through the Estuary by 2050, and measures to maximise the industrial development opportunities arising from this.
- Also included are proposed actions for scaling up the deployment of onshore renewable energy across the region, and proposed new initiatives in the transport, logistics, connectivity, and tourism sectors.
- creation of 10,000 new green jobs by 2035 and 50,000 by 2050,
- 2GW of green energy capacity in development by 2030, and up to 30GW installed by 2050.
- Establishment of an IDA – like body to drive off-shore renewable energy development and maximise benefits to Ireland
- Harness the potential of Tourism in the area and opportunities from Ryder Cup 2027
- Sustainable Aviation and other Fuels



Moneypoint – Green Atlantic Energy Hub

- Green Atlantic @ Moneypoint is a multi-billion Euro programme of significant investments on the site over the next decade resulting in hundreds of jobs, including:
- Renewable enablement: ESB has already commenced work on transforming Moneypoint into a green energy hub, breaking ground on a new €50m Sustainable System Support facility in the coming weeks – this Synchronous Compensator will be the largest of its kind in the world. This new plant will provide a range of electrical services to the electricity grid which would previously have been supplied by thermal fired power stations. Its operation will enable higher volumes of renewables on the system.
- Moneypoint Floating Offshore wind farm:
- A wind turbine construction hub: Moneypoint will become a centre for the construction and assembly of floating wind turbines. A deep-water port already exists at the site, making it an ideal staging ground for the construction of the wind farm.
- Hydrogen Energy: Investment in a green hydrogen production, storage and generation facility at Moneypoint towards the end of the decade. A clean, zero-carbon fuel, green hydrogen will be produced from renewable energy and used for power generation,



Shannon Foynes Port Company - Vision 2041

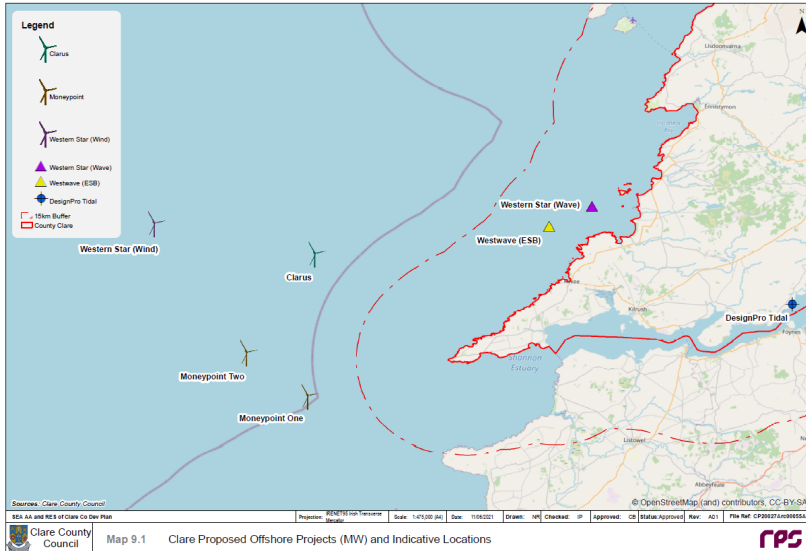
- Vision 2041 Masterplan puts Shannon Foynes Port on course to become international floating offshore wind energy hub
- Shannon Estuary has capacity to become major European logistics and trade centre, as well as contributor to Irish economy – international experts state

It recommends the establishment of four core facilities on the Shannon Estuary to support the delivery of floating offshore wind at scale

1. turbine integration and pre-commissioning at Foynes Deepwater Port
2. substructure assembly at Moneypoint
3. wet storage at various locations within the Estuary
4. Operations & Maintenance base at the Port of Foynes.



Offshore Renewable Energy Opportunities – Alignment of Policies – Maximise all Opportunities for Socio-Economic Development



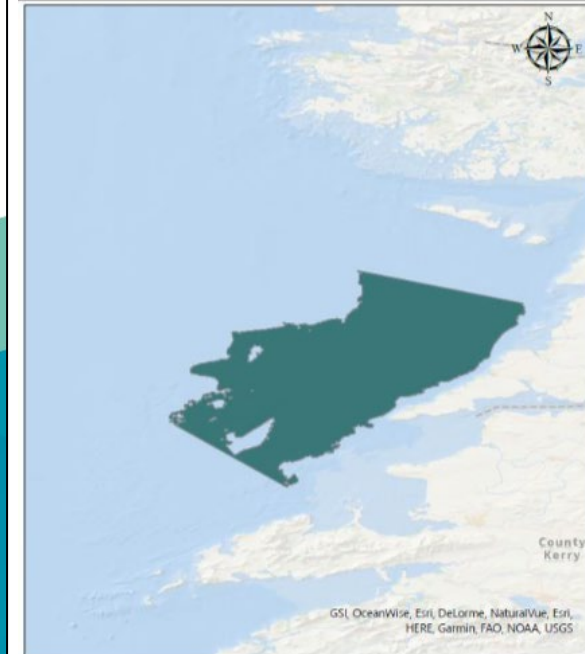
Riailtas na hÉireann
Government of Ireland

DRAFT Offshore Renewable Energy Development Plan II

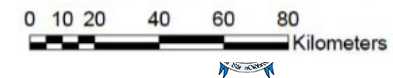
A National Spatial Strategy for the transition to the Enduring Regime

2023

Prepared by the Department of the Environment, Climate and Communications gov.ie

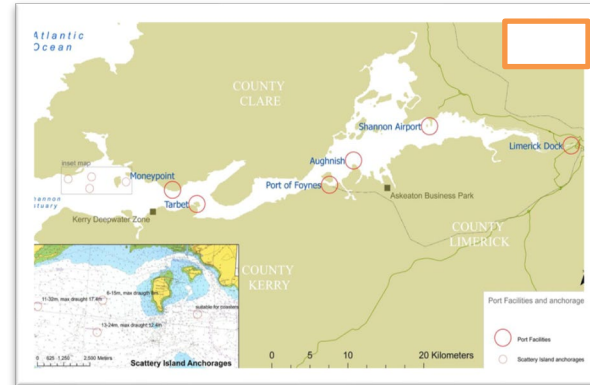


Mid-West Broad Area Floating Wind



The Shannon Estuary – Complete supply chain for the Offshore Wind sector

- The Shannon Estuary has the potential to provide the complete supply chain ;
 - Manufacturing – essential to dramatically reduce the LCOE
 - Floating Foundations
 - Blade
 - Turbines
 - Towers
 - Cables/Anchorages
 - Assembly
 - Staging
 - Berthage
 - Operations and Maintenance
 - Potential to become Offshore Wind Global Centre of Excellence (Moneypoint and Cahiracon are central to this)



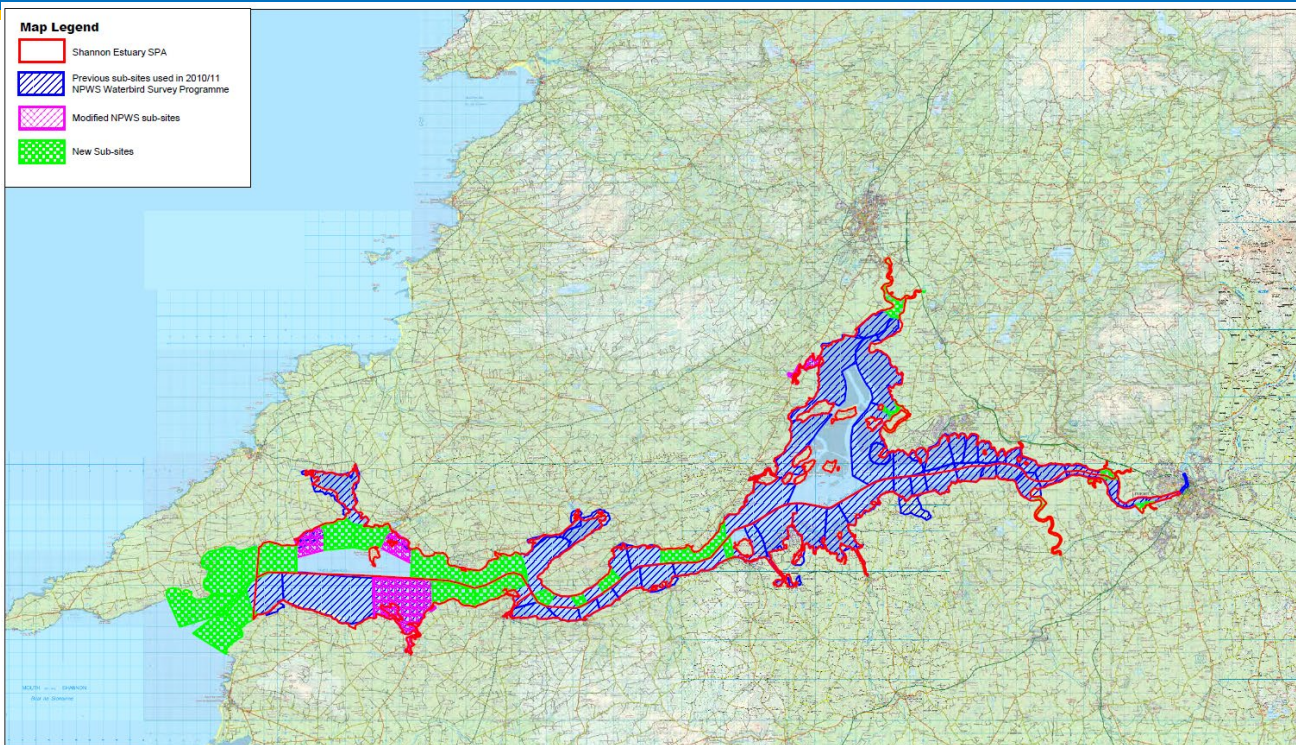
Plan (planner led) Initiatives

Data Gathering

- Currently surveys, data collection, site investigations are mainly developer led on a site-by-site basis to support individual planning applications for different stages of marine developments.
- This type of project led assessment does not take into consideration the wider ecosystem of the Shannon Estuary in terms of impacts – the entire basis for the SIFP - and poses a significant risk and potential delay to ORE projects.



Plan led – Proactive Data Gathering



Waterbird Usage Survey covering the entire Shannon and Fergus Estuaries SPA

Static Acoustic Monitoring Reports for Bottlenose Dolphins

- Use of deep-water shipping berths by BND
- Identification and rating of important areas for Bottlenose Dolphins

Wetlands Survey

Cultural Heritage Assessment of the Shannon Estuary

Much more is needed on an estuarine scale



The benefits of estuarine wide surveys

- Modest resources committed over a long period are far more efficient than one-off relatively short-term data gathering programmes.
- There is significant merit in all the Local Authorities or the SIFP-led environmental sub-committee leading the data gathering for a range of targeted priority species and habitats in a comprehensive manner for the entire Shannon Estuary together with an agreed sustainable approach to funding, gathering and ownership of said data.
- Albeit a non-statutory document, its alignment with the planning hierarchy and how it has influenced the relevant County Development Plans, RSES, NPF etc is key.



Renewable Energy Test Site - Cahircon

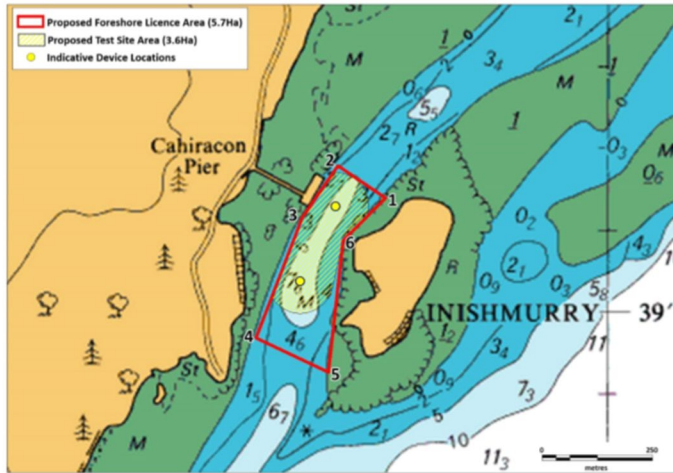


Figure 3.3: Location of proposed test site, proposed Foreshore Licence Area and indicative device locations in the Shannon Estuary

Table 3.2: Coordinates of the Foreshore Licence Area

Corner	Easting ITM	Northing ITM	Easting ING	Northing ING	Longitude (DD)	Latitude (DD)
1	525026	656291	125059.3	156247	-9.10807	52.65263
2	524919	656366	124952.2	156322	-9.10967	52.65329
3	524836	656248	124869.2	156204	-9.11087	52.65221
4	524727	655978	124760.2	155933.9	-9.11242	52.64977
5	524891	655898	124924.2	155853.9	-9.10998	52.64908
6	524928	656196	124961.2	156151.9	-9.1095	52.65176



- Have applied for a Foreshore Licence
- Testing of 2 x 60kW devices for a total of 18 months during 28 month window
- Non-commercial, demonstration that will be decommissioned and removed

DESIGNPRO
RENEWABLES

G KINETIC ENERGY LTD

CLAREMEZ
Maritime Economic Zone

Shannon Estuary - Cahiracon Pier – Cruise Industry

- Cruise Shannon - a regional approach to increasing the number of Cruise calls to the Shannon Estuary.
- Regional group comprising of the adjoining Local Authorities, Failte Ireland, SFPC and Shannon Airport Authority to build an ambitious *Cruise Shannon Estuary* brand prior to the Ryder Cup in 2027.
- At present approximately 7 cruise ships call to the Shannon Estuary per year docking just off Foynes Island predominately with passengers tendered across to Foynes Yacht Club.
- Sustainable Cruise – Berthing mid-estuary; tender small craft to Limerick/Kerry and Clare



Maritime Training to meet sector requirements – Kilrush Maritime Training Centre

- Create a **specialist commercial training facility**, providing mandatory maritime training courses and value-added training for non-seafaring personnel taking up positions at sea.
- Develop the facility to include **field research labs**, marine equipment, and marine transport for a large national and **international third-level field research marketplace** which would be created.
- This would centre on the **Shannon Estuary SAC/SPA** and Marine Protected Area and compliment the research undertaken by the Shannon Whale and Dolphin Group in Kilrush over the past 20 years, existing visits by 3rd Level Institutions and research under the SIFP
- The facility will be ideally located at Kilrush Marina on the Shannon Estuary **proximate to Moneypoint to service the Offshore Wind Energy** sector in terms of training and development in a wide range of basic maritime safety training amongst others.



Key Lessons for Planners

Long term vision needed (e.g. Shannon Estuary plan-led approach commenced 2010)

Collaboration is key

Flexibility and pragmatism

Planners as advocates

Stakeholder engagement

Beneficial and Key skillsets planners have and need to develop (e.g. marine planning, economic development)

Balance issues and competing interests

Resilience - Retain the vision. Policy certainty key

Plan implementation and Project delivery





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