



This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.



Clean  
Energy  
Project



Shetland  
Islands  
Council



Net Zero  
Technology  
Centre  
Technology Driving Transition



# ORION Project – Asia Clean Energy Forum 2022

# Ambition

## Create

Create on Shetland a green hydrogen export business at industrial scale by harnessing offshore wind power and creating new jobs

## Transform

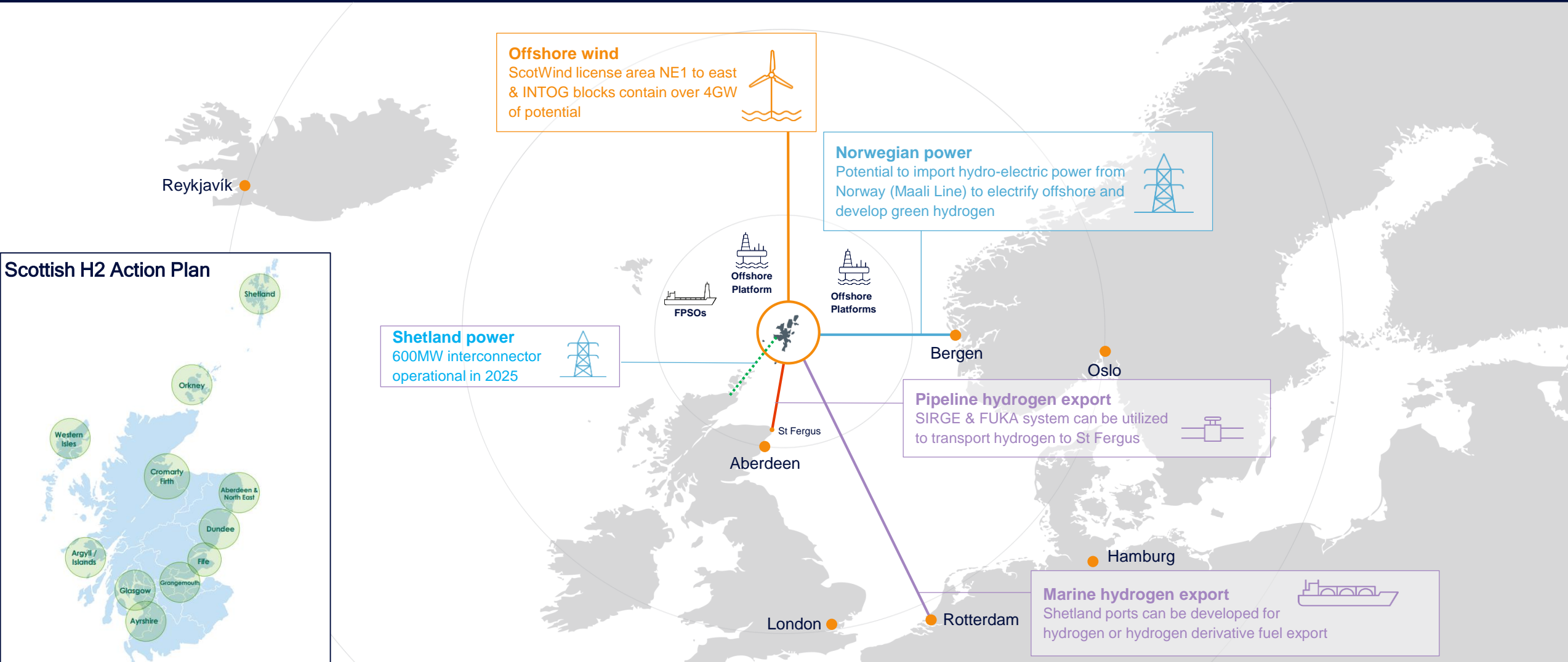
Transform Shetland's current dependency on fossil fuels to affordable renewable energy to address fuel poverty and improve community wealth

## Enable

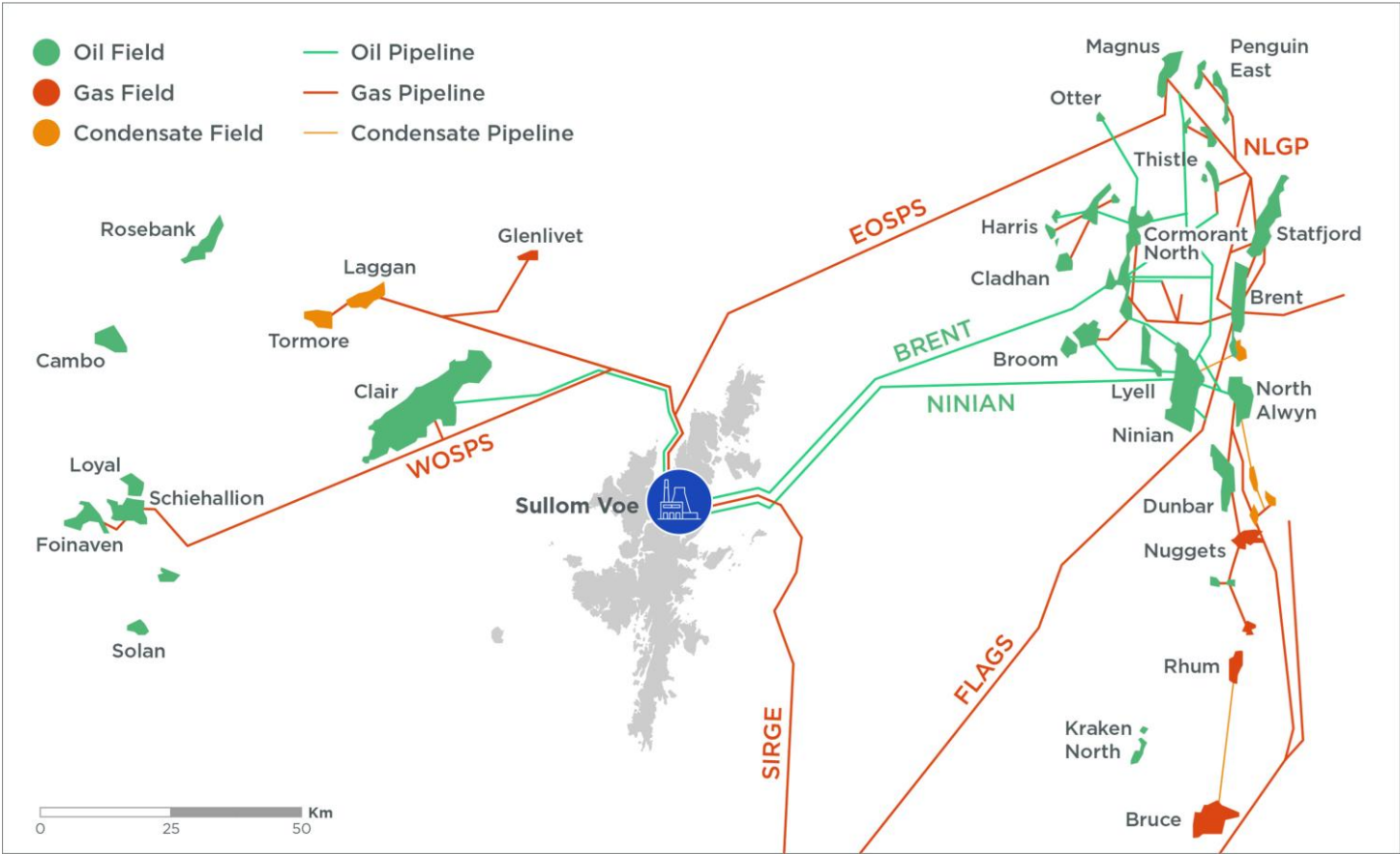
Enable offshore oil and gas sector transition to net zero utilizing renewable energy to sustain thousands of jobs and security of supply



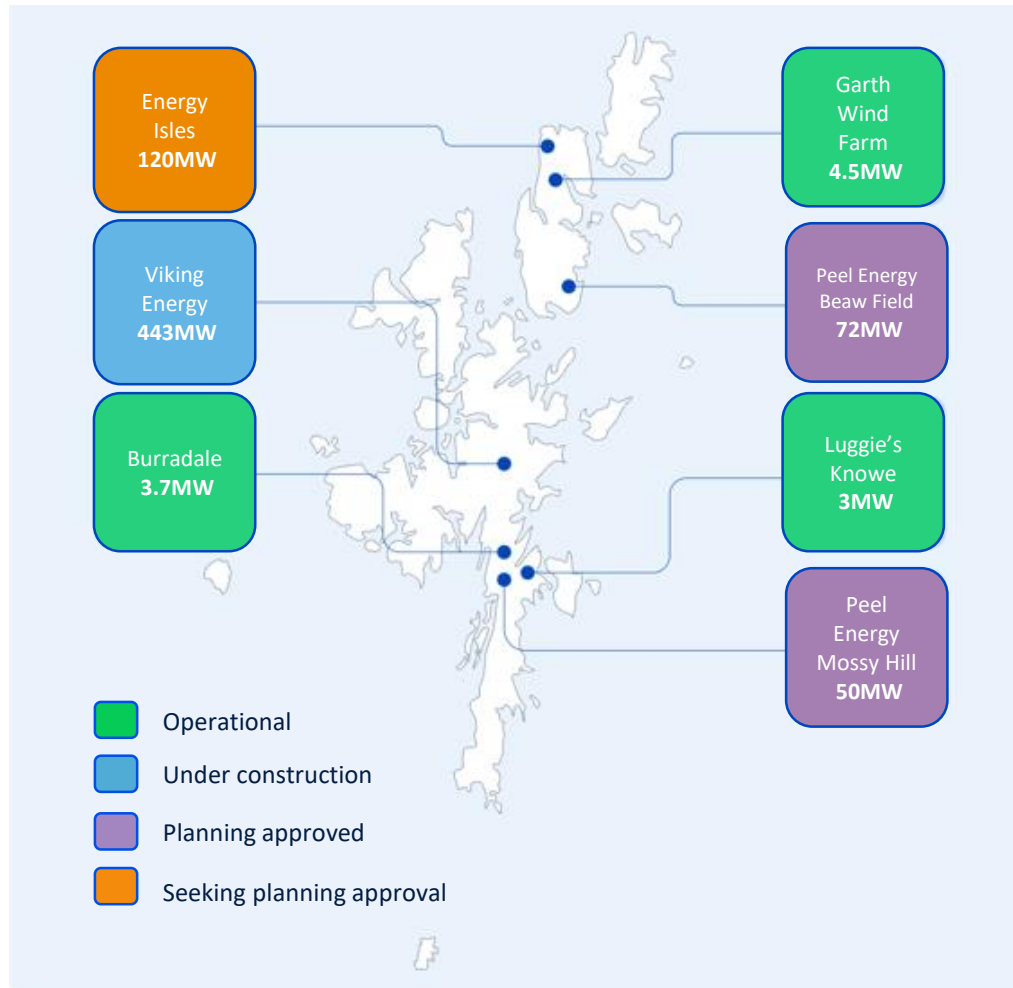
# Shetland Regional Energy Hub



# Connected Shetland



# Onshore Wind



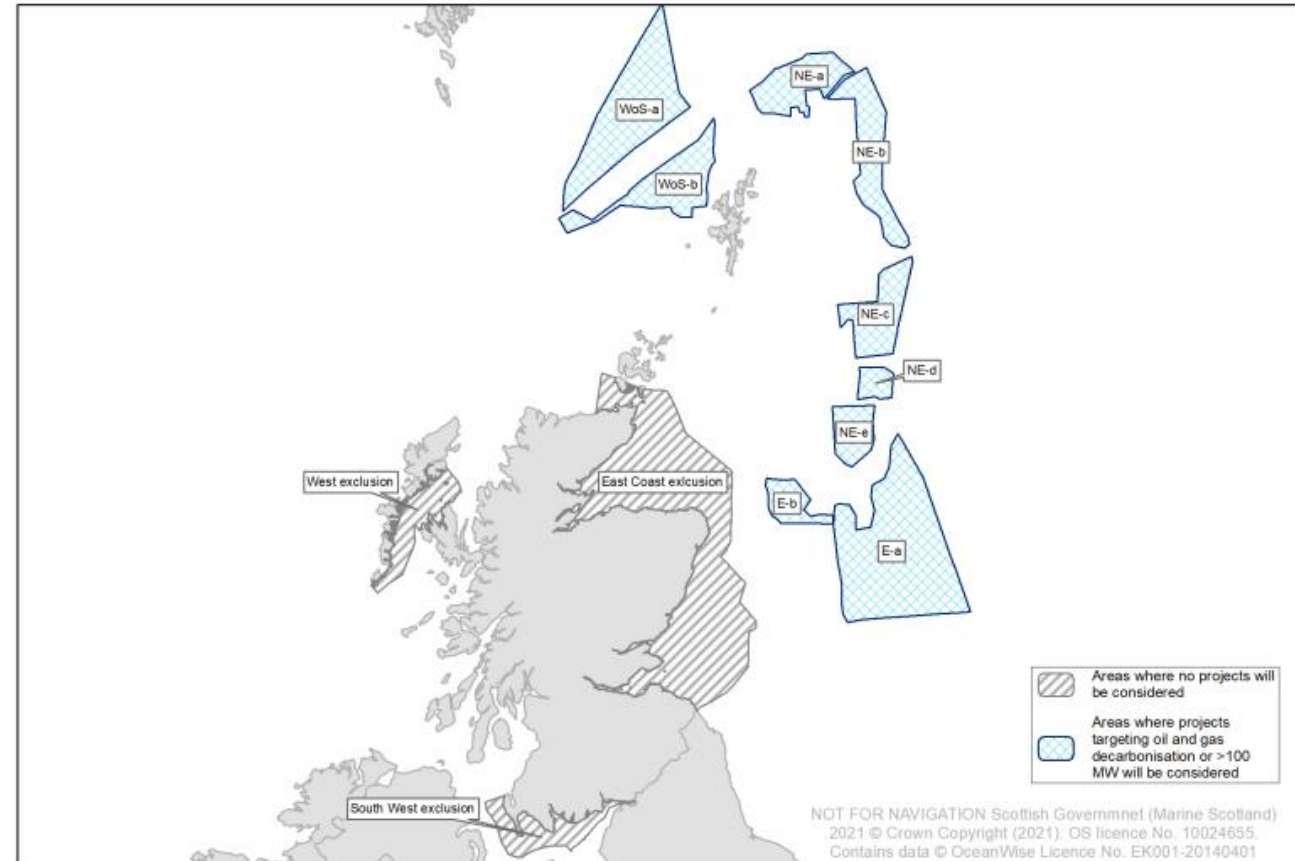
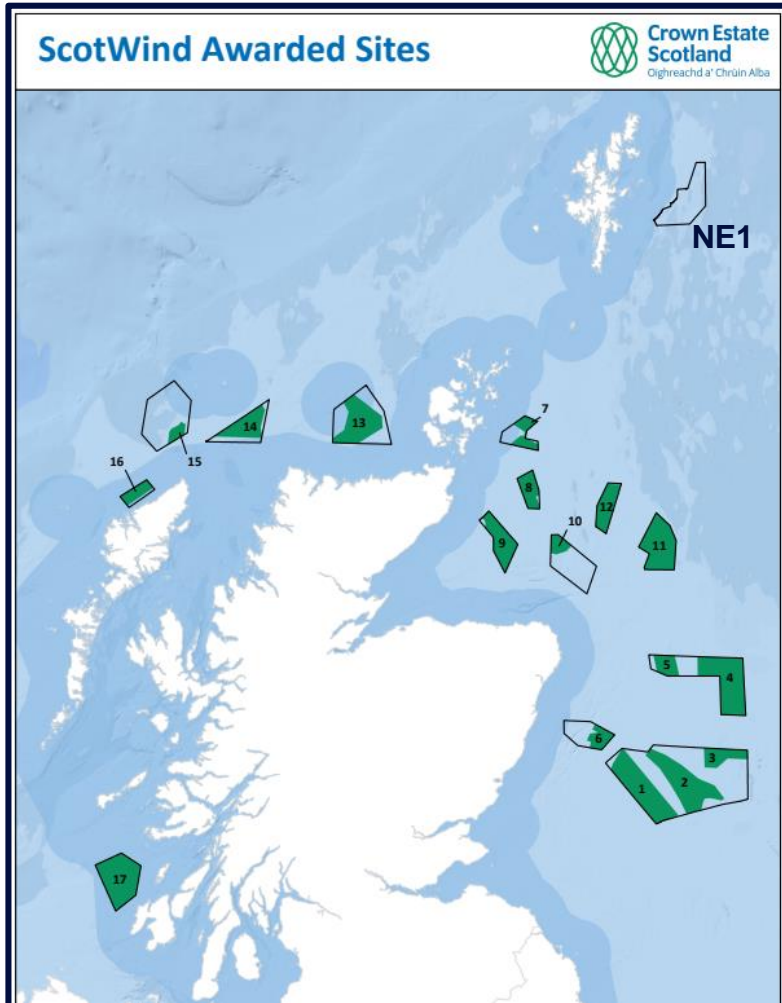
# Tidal Power



[www.novainnovation.com](http://www.novainnovation.com)

Tidal power will play an important role in providing power locally and potentially green hydrogen

# Offshore Wind



# Sullom Voe Hub Potential

Renewable energy could electrify current & future plant and port infrastructure to deliver net zero operations

Sella Ness

Scatsta

Deepwater port could export green H<sub>2</sub>, eFuels & support offshore wind sector

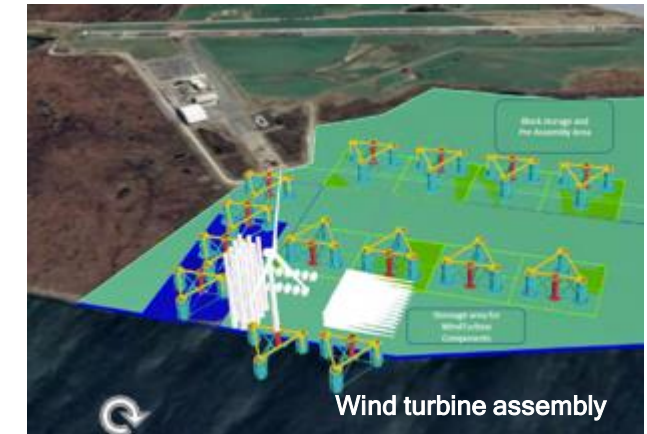
Shetland Gas Plant

1500 acres of oil & gas terminal infrastructure could be utilized for green H<sub>2</sub> production & offshore wind sector support

Sullom Voe Terminal

Repurpose Sullom Voe and establish business opportunities harnessing skills to sustain and create new jobs

# Scatsta Hub Potential



# Shetland's Ports

Sullom Voe Tanker Terminal



Dales Voe Facility



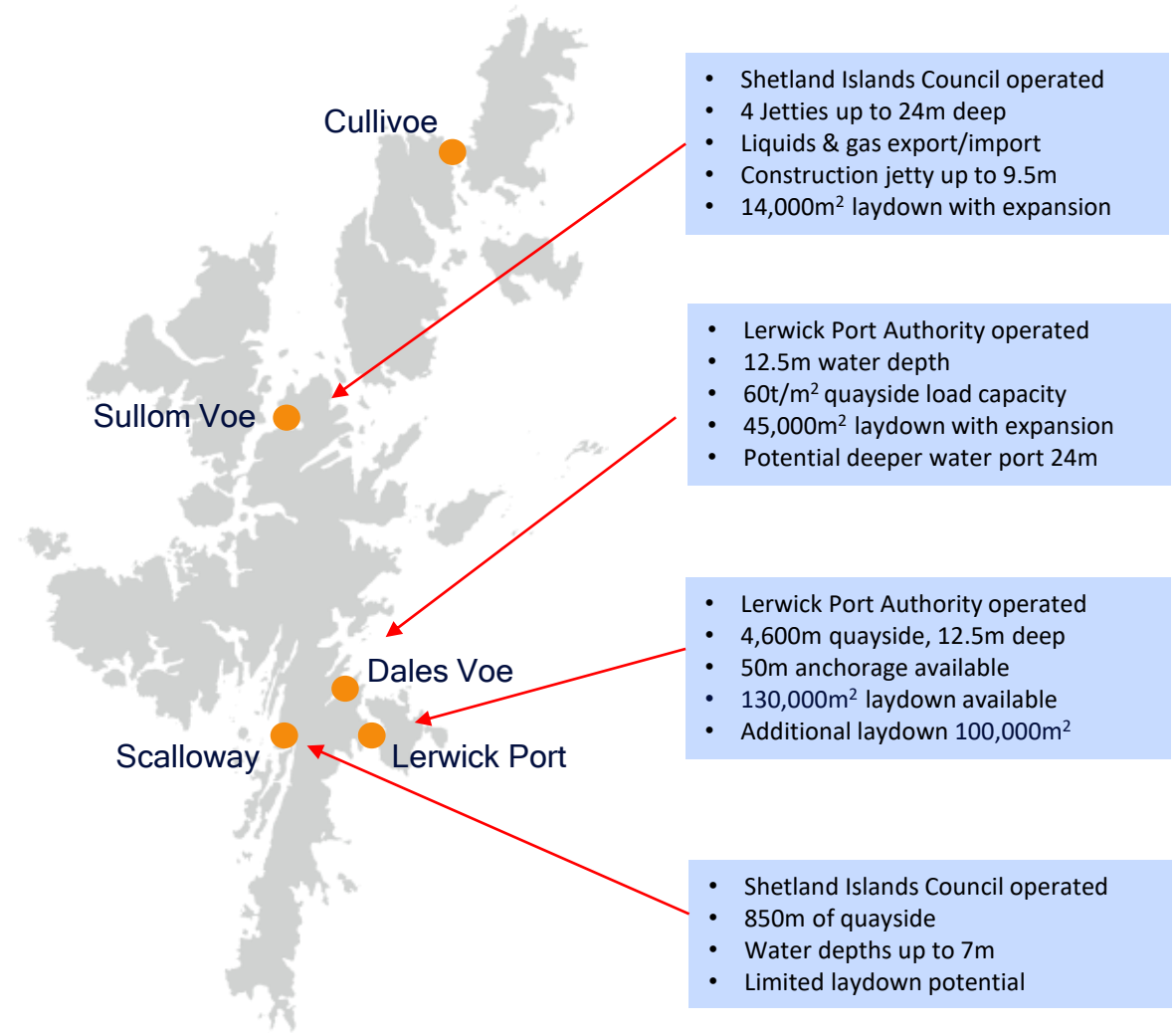
Lerwick Port Facility



Scalloway Port Facility



- 40 years+ oil & gas export from Sullom Voe terminal
- Deep water berthing facilities
- Support offshore wind & H2 export
- ORION linked EU & UK government port initiatives



# Marine Workgroup

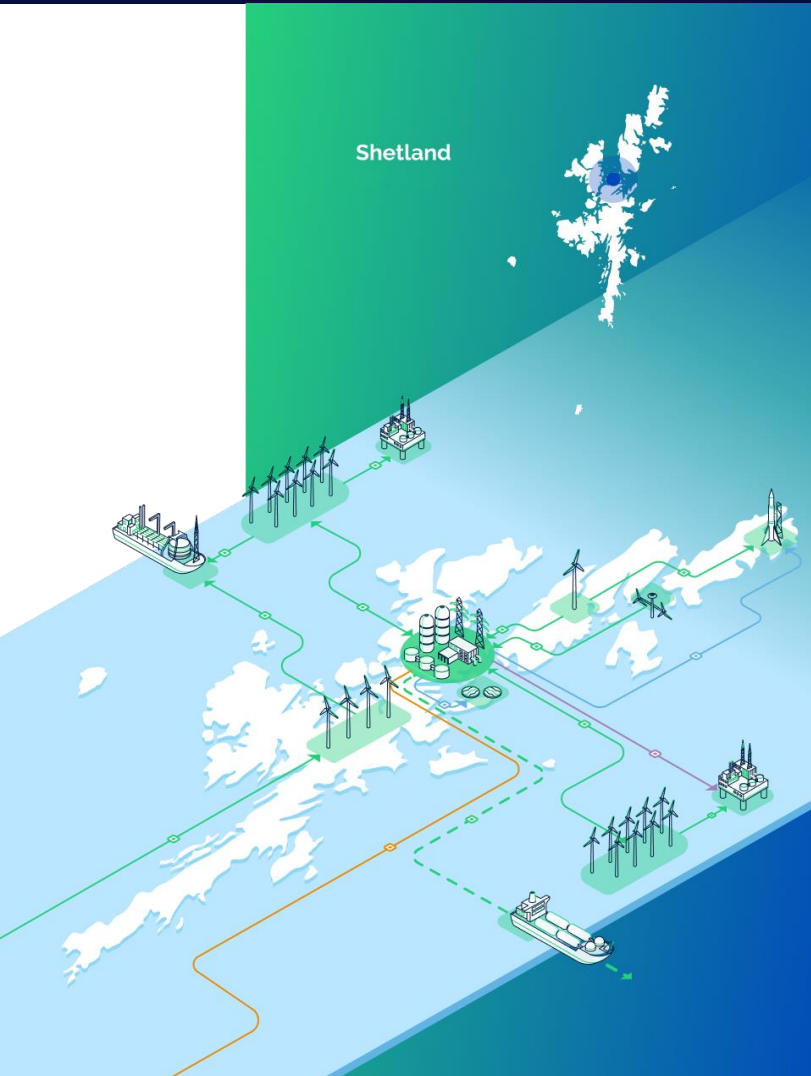
The key themes covered by the workgroup are:

- Vessel Replacement
- Ports & Quayside Infrastructure
- Marine Fuels
- Supply Chain
- Community & Communications



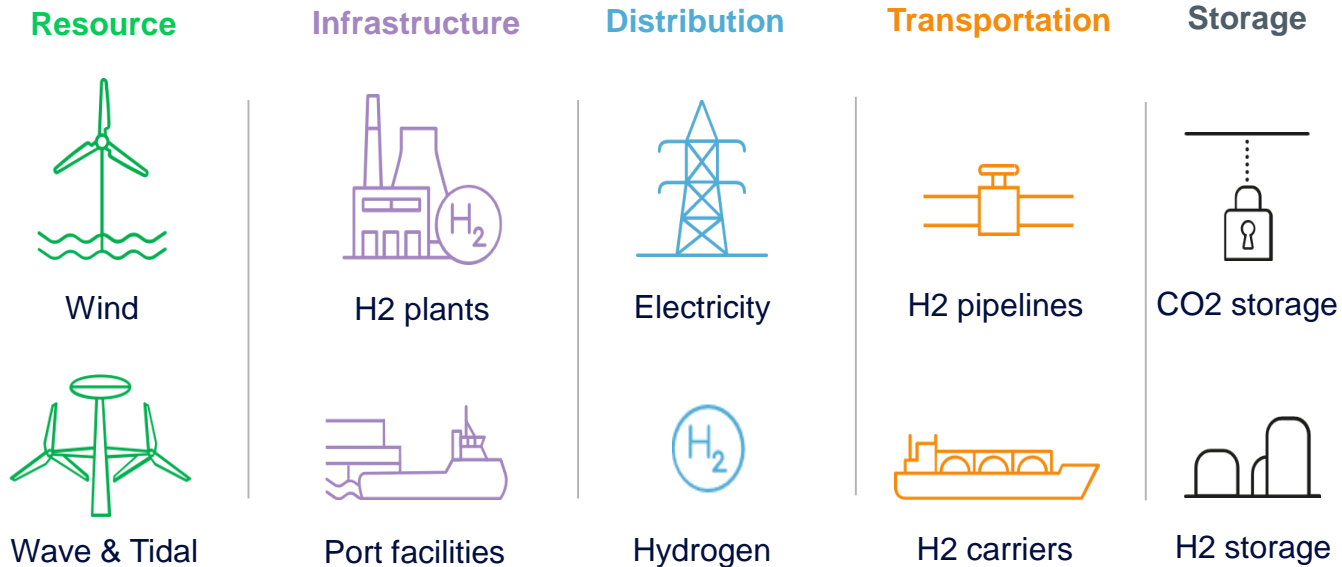
Photos courtesy of Shetland Fishermen's Association

# Hydrogen Scale Up



- 2025-2027: Small scale pilot project
- 2027-2030: Utilise large scale onshore wind
- 2030+: Offshore floating wind becomes available along with offshore hydrogen production

# Shetland Supply Chain



## Shetland Energy Transition Skills Group

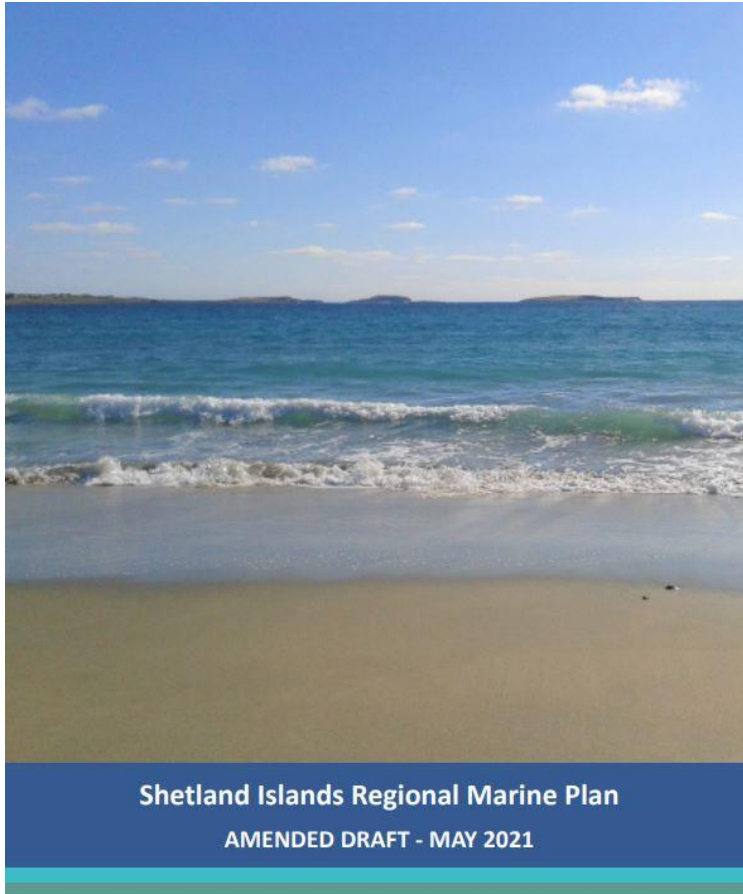
- Ensure that skills issues across Shetland, and wider, energy sector are well understood
- Ensure a skilled workforce is in place to address challenges and capitalise on opportunities
- Ensure a co-ordinated and partnership approach to help address Shetland's skills & training requirements
- Inform and influence Shetland's education and skills provision



Partnership approach working closely with industry



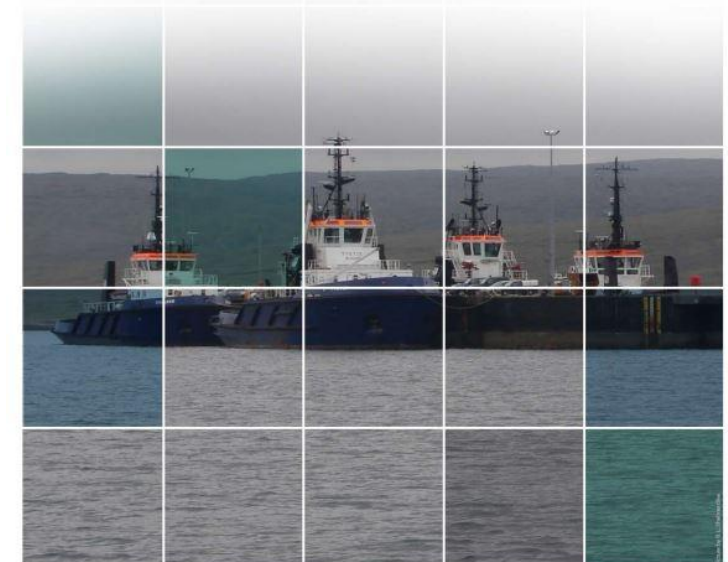
# Marine Environment



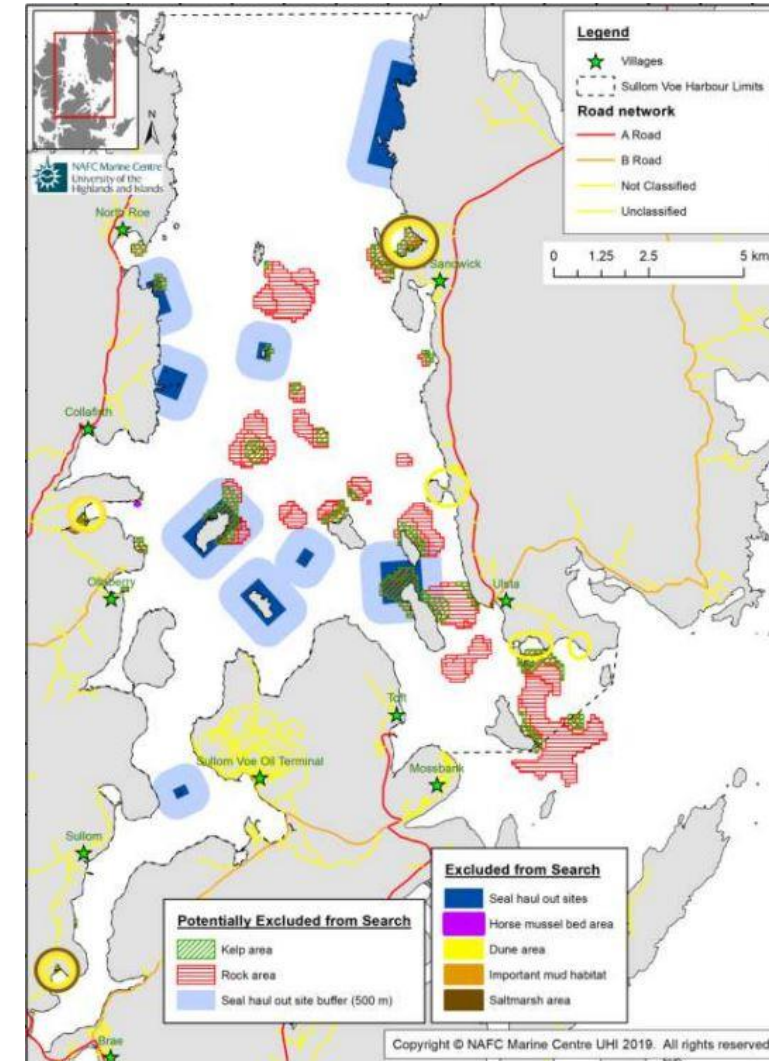
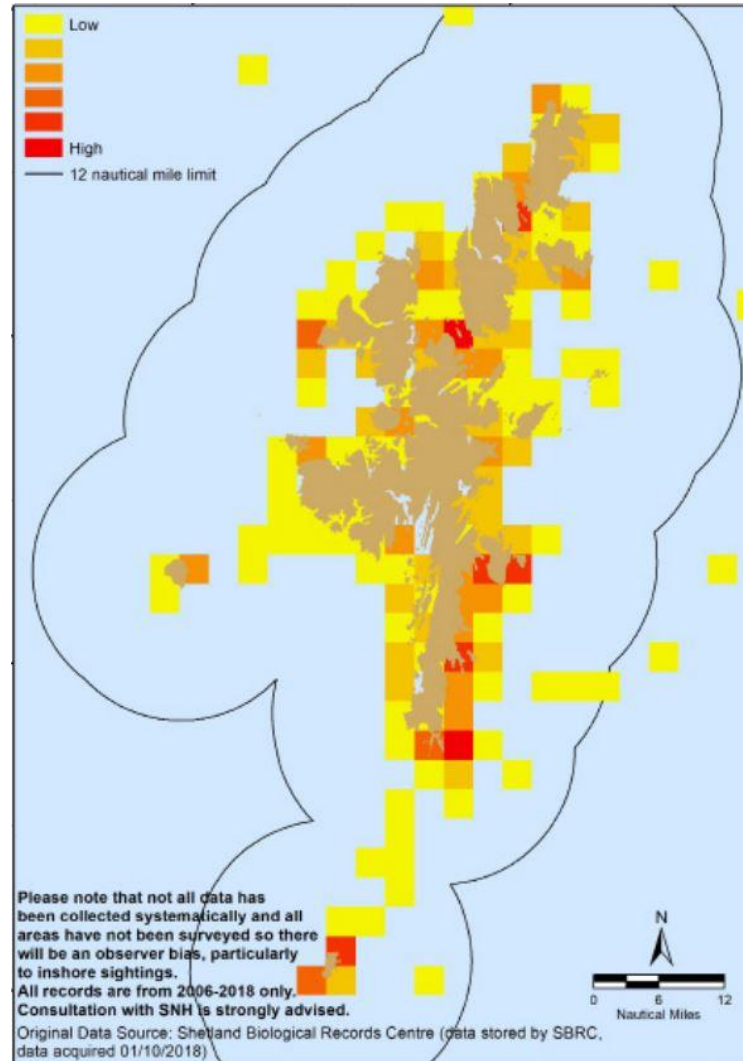
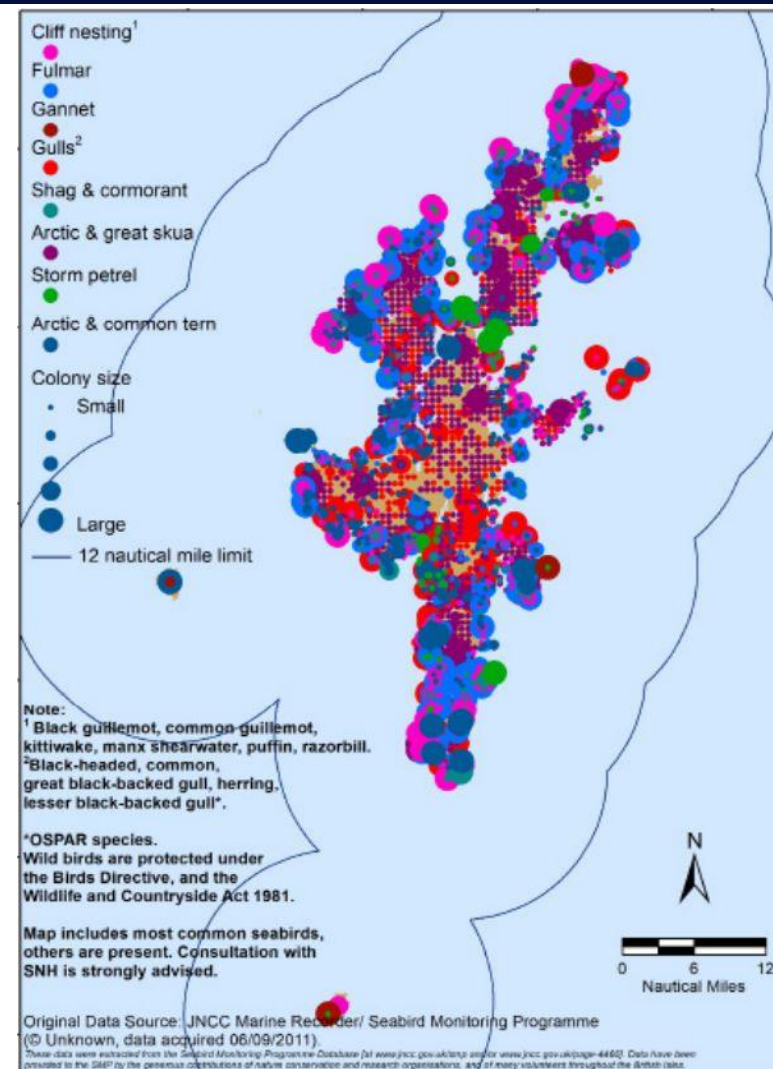
Shetland Islands Regional Marine Plan  
AMENDED DRAFT - MAY 2021



Sullom Voe Harbour Area – Draft Master Plan



# Masterplanning



# Shaping Shetland as the UK's first clean energy island

**ORION** is a strategic framework connecting organisations with a common ambition: to transform the Shetland region into a centre for secure and affordable clean energy.

- Harnessing offshore wind to produce green hydrogen for transport and heating
- Delivering clean and affordable energy for Scotland, the UK and Europe
- Creating new jobs, tackling fuel poverty and reducing carbon emissions
- Decarbonising offshore oil and gas to support the net zero transition

Our vision is to build a world-leading clean energy hub, attracting people of all ages to live, work, study and invest.

**Email:**  
[harry.thomson@shetland.gov.uk](mailto:harry.thomson@shetland.gov.uk)

**Shetland: Islands of Opportunity**

In Partnership with:



**Shetland  
Islands  
Council**



**Net Zero  
Technology  
Centre**  
Technology Driving Transition

