

Offshore Wave Energy in Scottish Waters

# Draft Regional Locational Guidance

#### **CONTENTS**

#### 1. INTRODUCTION

4	1	 l۵	4	_	ہ		-4		
	١.1	ш	ш	U	U	u	GU	ior	1

- 1.2 Offshore Wave Device Characteristics
- 1.3 Sectoral Marine Plan Development Process
- 1.4 Regional Locational Guidance Areas

# 2. SCOTTISH MARINE AREA – KEY ISSUES

- 2.1 Resource
- 2.2 Aquaculture
- 2.3 Aviation
- 2.4 Bathymetry and Seabed
- 2.5 Cultural Heritage
- 2.6 Defence
- 2.7 Environment

Coastal and Flood Protection

Designated Sites

Landscape Designations within Region

Marine Mammals, Basking Sharks, Seals and Seabirds

2.8 Fishing

Representation of fishery data

- 2.9 Infrastructure and Grid Provision
- 2.10 Oil and Gas
- 2.11 Planning
- 2.12 Ports and Harbours
- 2.13 Recreation

Recreational Angling

Recreational Boating

Scuba Diving

Sea Kayaking

Small Boat Activity

Surfing and Windsurfing

- 2.14 Shipping
- 2.15 Social
- 2.16 Supply Chain
- 2.17 Tourism

# **REGIONS**

3.	NORTH
3.1	Resource
3.2	Aquaculture
3.3	Aviation
3.4	Bathymetry and Seabed
3.5	Cultural Heritage
3.6	Defence
3.7	Environment
	Coastal and Flood Protection
	Designated Sites
	Landscape Designations within Region
	Marine Mammals, Basking Sharks and Seals Seabirds
3.8	Fishing
3.0	Commercial Fishing Regional Overview
	Areas of Search Interactions
	Scotmap Pilot Project
	Fish Processing Activities
	Wild Salmon and Sea Trout
3.9	Infrastructure and Grid Provision
0.0	Existing
	Future
3.10	Oil and Gas
3.11	Planning
3.12	Ports and Harbours
3.13	Recreation
	Recreational Angling
	Recreational Boating
	Scuba Diving
	Sea Kayaking
	Small Boat Activity
	Surfing and Windsurfing
	Areas of Search
3.14	Shipping
3.15	Social
3.16	Supply Chain
3.17	Tourism

# 4. NORTH WEST

4.1 Resource
4.2 Aquaculture
4.3 Aviation
4.4 Bathymetry and Seabed
4.5 Cultural Heritage
4.6 Defence
4.7 Environment

Designated Sites Landscape Designations within Region Marine Mammals, Basking Sharks and Seals Seabirds 4.8 **Fishing** Commercial Fishing Regional Overview Areas of Search Interaction Fish Processing Activities Wild Salmon and Sea Trout 4.9 Infrastructure and Grid Provision Existing **Future** 4.10 Oil and Gas 4.11 Planning 4.12 Ports and Harbours 4.13 Recreation Recreational Angling Recreational Boating Scuba Diving Sea Kayaking Small Boat Activity Surfing and Windsurfing Areas of Search 4.14 Shipping 4.15 Social Supply Chain 4.16 4.17 Tourism 5. **WEST** 5.1 Resource 5.2 Aquaculture 5.3 Aviation Bathymetry and Seabed 5.4 5.5 Cultural Heritage 5.6 Defence 5.7 Environment **Designated Sites** Landscape Designations within Region Marine Mammals, Basking Sharks and Seals Seabirds 5.8 **Fishing** Commercial Fishing Regional Overview Areas of Search Interaction Fish Processing Activities Wild Salmon and Sea Trout 5.9 Infrastructure and Grid Provision Existing

Coastal and Flood Protection

# Future

- 5.10 Oil and Gas
- 5.11 Planning
- 5.12 Ports and Harbours
- 5.13 Recreation

Recreational Angling Recreational Boating

Scuba Diving
Sea Kayaking
Small Boat Activity
Surfing and Windsurfing
Areas of Search

- 5.14 Shipping
- 5.15 Social
- 5.16 Supply Chain
- 5.17 Tourism

### 6. REFERENCES

#### **FIGURES**

- 1.1 Map of Scottish Marine Area
- 1.2 Offshore Wave Energy Scoping Areas of Search
- 1.3 Scottish Offshore Renewable Energy Regions (SORERs)
- 2.1 Aquaculture activities in Scottish Waters
- 2.2 Aviation activities in Scotland
- 2.3 Bathymetry in Scottish Waters
- 2.4 Defence activities in Scottish Waters
- 2.5 Interconnector cables around Scotland
- 2.6 Offshore Renewable Energy and Grid Upgrades
- 2.7 Oil and Gas activities in Scottish Waters
- 2.8 Ports and Harbours around Scotland
- 2.9 Scuba Diving sites around Scotland
- 2.10 Sea Kayaking and Canoeing areas around Scotland
- 2.11 Dinghy Sailing Clubs around Scotland
- 2.12 Surfing and Windsurfing locations around Scotland
- 2.13 Ferry Routes around Scotland
- 2.14 Shipping designations in Scottish Waters
- 3.1 Orkney and Shetland Wave Energy Resource (Wave Height)
- 3.2 Orkney and Shetland Wave Energy Resource (Wave Power)
- 3.3 North West of Cape Wrath and North Sutherland Coast (Areas of Search) Wave Energy Resource (Wave Height)
- 3.4 North West of Cape Wrath and North Sutherland Coast (Areas of Search) Wave Energy Resource (Wave Power)
- 3.5 Aquaculture in the North Region
- 3.6 Aguaculture activities in the Orkney & Shetland (Area of Search)
- 3.7 Aquaculture Activities in North West of Cape Wrath and North Sutherland Coast (Area of Search)
- 3.8 Aviation activities in the Orkney & Shetland (Area of Search)
- 3.9 Aquaculture Activities in North West of Cape Wrath and North Sutherland Coast (Areas of Search)
- 3.10 Orkney and Shetland (Area of Search) Seabed Sediments
- 3.11 North West of Cape Wrath & North Sutherland Coast (Areas of Search) Seabed Sediments
- 3.12 Orkney and Shetland (Area of Search) Seabed Seabed Predicted EUNIS Habitats
- 3.13 North West of Cape Wrath & North Sutherland Coast (Areas of Search) Seabed Predicted EUNIS Habitats
- 3.14 Key Cultural Heritage Assets in the Orkney & Shetland (Area of Search)
- 3.15 Key Cultural Heritage Assets in the North West of Cape Wrath & North Sutherland Coast (Areas of Search)
- 3.16 Defence activities in North Region
- 3.17 Defence activities in the Orkney and Shetland (Area of Search)
- 3.18 Defence activities in the North West of Cape Wrath & North Sutherland Coast (Areas of Search)
- 3.19 Designated sites in Orkney & Shetland (Area of Search)

- 3.20 Designated sites in North West of Cape Wrath & North Sutherland Coast (Areas of Search)
- 3.21 Cetaceans, Seals and Basking Sharks in Orkney & Shetland (Area of Search)
- 3.22 Cetaceans, Seals and Basking Sharks in North West of Cape Wrath & North Sutherland Coast (Areas of Search)
- 3.23 Seabirds, Important Bird Areas and RSPB Reserves in Orkney & Shetland (Area of Search) (Winter)
- 3.24 Seabirds, Important Bird Areas and RSPB Reserves in Orkney & Shetland (Area of Search) (Breeding)
- 3.25 Seabirds, Important Bird Areas and RSPB Reserves in North West of Cape Wrath & North Sutherland Coast (Area of Search) (Winter)
- 3.26 Seabirds, Important Bird Areas and RSPB Reserves in North West of Cape Wrath & North Sutherland Coast (Area of Search) (Breeding)
- 3.27 Fishing Intensity in the Orkney & Shetland (Area of Search) (Scallop Dredge, Demersal Mobile Gear, and Nephrops Mobile Gear)
- 3.28 Fishing Intensity in the Orkney & Shetland (Area of Search) (Pelagic, Demersal Static Gear, Nephrops Creels)
- 3.29 Fishing Intensity in the Orkney & Shetland (Area of Search) (Brown Crab Creels, Lobster Creels, Squid)
- 3.30 Inshore Fisheries in the Orkney & Shetland (Area of Search) (Mobile Gears)
- 3.31 Inshore Fisheries in the Orkney & Shetland (Area of Search) (Static Gears)
- 3.32 Fishing Intensity in the North West of Cape Wrath & North Sutherland Coast (Areas of Search) (Scallop Dredge, Demersal Mobile Gear, and Nephrops Mobile Gear)
- 3.33 Fishing Intensity in the North West of Cape Wrath & North Sutherland Coast (Areas of Search) (Pelagic, Demersal Static Gear, Nephrops Creels)
- 3.34 Fishing Intensity in the North West of Cape Wrath & North Sutherland Coast (Areas of Search) (Brown Crab Creels, Lobster Creels, Squid)
- 3.35 Inshore Fisheries in the North West of Cape Wrath & North Sutherland Coast (Areas of Search) (Mobile Gears)
- 3.36 Inshore Fisheries in the North West of Cape Wrath & North Sutherland Coast (Areas of Search) (Static Gears)
- 3.37 Scotmap Pilot Project Output Map 1
- 3.38 Scotmap Pilot Project Output Map 2
- 3.39 Interconnector cables in the North Region
- 3.40 Existing Infrastructure in the Orkney & Shetland (Area of Search)
- 3.41 Existing Infrastructure in the North West of Cape Wrath & North Sutherland Coast (Area of Search)
- 3.42 Oil and Gas activities in the North Region
- 3.43 Oil and Gas activities in the Orkney & Shetland (Area of Search)
- 3.44 Oil and Gas activities in the North West of Cape Wrath & North Sutherland Coast (Areas of Search)
- 3.45 Recreational activity in the Orkney & Shetland (Area of Search)
- 3.46 Recreational activity in the North West of Cape Wrath & North Sutherland Coast (Areas of Search)
- 3.47 Recreational boating activity in the North Region
- 3.48 Recreational diving activities in the North Region
- 3.49 Dinghy Sailing Clubs in the North Region
- 3.50 Kayaking and Small Boat Activities in the North Region
- 3.51 Surfing and Windsurfing locations in the North Region

- 3.52 Ferry Routes in the North Region
- 3.53 Shipping activity in the Orkney & Shetland (Area of Search)
- 3.54 Shipping activity in the North West of Cape Wrath & North Sutherland Coast (Areas of Search)
- 3.55 Key tourist sites in the North Region
- 3.56 Cultural and Maritime Heritage Assets in North Region
- 3.57 Coastal awards in the North Region
- 4.1 West Hebrides (West Lewis) Wave Energy Resource (Wave Height)
- 4.2 West Hebrides (West Lewis) Wave Energy Resource (Wave Power)
- 4.3 Aquaculture in the North West Region
- 4.4 Aquaculture activities in the West Hebrides (West Lewis) (Area of Search)
- 4.5 Aviation activities in the West Hebrides (West Lewis) (Area of Search)
- 4.6 West Hebrides (West Lewis) (Area of Search) Seabed Sediments
- 4.7 West Hebrides (West Lewis) (Area of Search) Seabed Seabed Predicted EUNIS Habitats
- 4.8 Key Cultural Heritage Assets in the West Hebrides (West Lewis) (Area of Search)
- 4.9 Defence activities in North West Region
- 4.10 Defence activities in the West Hebrides (West Lewis) (Area of Search)
- 4.11 Coastal & Flood Defence Schemes in North West Region
- 4.12 Designated sites in West Hebrides (West Lewis) (Area of Search)
- 4.13 Cetaceans, Seals and Basking Sharks in West Hebrides (West Lewis) (Area of Search)
- 4.14 Seabirds, Important Bird Areas and RSPB Reserves in West Hebrides (West Lewis) (Area of Search) (Winter)
- 4.15 Seabirds, Important Bird Areas and RSPB Reserves in West Hebrides (West Lewis) (Area of Search) (Breeding)
- 4.16 Fishing Intensity in the West Hebrides (West Lewis) (Area of Search) (Scallop Dredge, Demersal Mobile Gear, and Nephrops Mobile Gear)
- 4.17 Fishing Intensity in the West Hebrides (West Lewis) (Area of Search) (Pelagic, Demersal Static Gear, Nephrops Creels)
- 4.18 Fishing Intensity in the West Hebrides (West Lewis) (Area of Search) (Brown Crab Creels, Lobster Creels, Squid)
- 4.19 Inshore Fisheries in the West Hebrides (West Lewis) (Area of Search) (Mobile Gears)
- 4.20 Inshore Fisheries in the West Hebrides (West Lewis) (Area of Search) (Static Gears)
- 4.21 Salmon and Sea Trout Fishing Locations in North West Region
- 4.22 Interconnector cables in the North West Region
- 4.23 Existing Infrastructure in the West Hebrides (West Lewis) (Area of Search)
- 4.24 Oil and Gas activities in the North West Region
- 4.25 Oil and Gas activities in the West Hebrides (West Lewis) (Area of Search)
- 4.26 Ports & Harbours in the North West Region
- 4.27 Recreational activity in the West Hebrides (West Lewis) (Area of Search)
- 4.28 Recreational boating activity in the North West Region
- 4.29 Recreational diving activities in the North West Region
- 4.30 Dinghy Sailing Clubs in the North West Region
- 4.31 Kayaking and Small Boat Activities in the North West Region
- 4.32 Surfing and Windsurfing locations in the North West Region

- 4.33 Ferry Routes in the North West Region
- 4.34 Shipping activity in the West Hebrides (West Lewis) (Area of Search)
- 4.35 Key tourist sites in the North West Region
- 4.36 Cultural and Maritime Heritage Assets in North West Region
- 4.37 Coastal awards in the North West Region
- 5.1 West Hebrides (Barra & Tiree) Wave Energy Resource (Wave Height)
- 5.2 West Hebrides (Barra & Tiree) Wave Energy Resource (Wave Power)
- 5.3 West Hebrides (Mull & Islay) (Areas of Search) Wave Energy Resource(Wave Height)
- 5.4 West Hebrides (Mull & Islay) (Areas of Search) Wave Energy Resource (Wave Power)
- 5.5 Aquaculture in the West Region
- 5.6 Aguaculture activities in the West Hebrides (Barra & Tiree) (Area of Search)
- 5.7 Aquaculture Activities in West Hebrides (Mull & Islay) (Area of Search)
- 5.8 Aviation activities in the West Hebrides (Barra & Tiree) (Area of Search)
- 5.9 Aquaculture Activities in West Hebrides (Mull & Islay) (Areas of Search)
- 5.10 West Hebrides (Barra & Tiree) (Area of Search) Seabed Sediments
- 5.11 West Hebrides (Mull & Islay) (Areas of Search) Seabed Sediments
- 5.12 West Hebrides (Barra & Tiree) (Area of Search) Seabed Seabed Predicted EUNIS Habitats
- 5.13 West Hebrides (Mull & Islay) (Areas of Search) Seabed Predicted EUNIS Habitats
- 5.14 Key Cultural Heritage Assets in the West Hebrides (Barra & Tiree) (Area of Search)
- 5.15 Key Cultural Heritage Assets in the West Hebrides (Mull & Islay) (Areas of Search)
- 5.16 Defence activities in West Region
- 5.17 Defence activities in the West Hebrides (Barra & Tiree) (Area of Search)
- 5.18 Defence activities in the West Hebrides (Mull & Islay) (Areas of Search)
- 5.19 Coastal and Flood Defence Schemes in the West Region
- 5.20 Designated sites in West Hebrides (Barra & Tiree) (Area of Search)
- 5.21 Designated sites in West Hebrides (Mull & Islay) (Areas of Search)
- 5.22 Cetaceans, Seals and Basking Sharks in West Hebrides (Barra & Tiree) (Area of Search)
- 5.23 Cetaceans, Seals and Basking Sharks in West Hebrides (Mull & Islay) (Areas of Search)
- 5.24 Seabirds, Important Bird Areas and RSPB Reserves in West Hebrides (Barra & Tiree) (Area of Search) (Winter)
- 5.25 Seabirds, Important Bird Areas and RSPB Reserves in West Hebrides (Barra & Tiree) (Area of Search) (Breeding)
- 5.26 Seabirds, Important Bird Areas and RSPB Reserves in West Hebrides (Mull & Islay) (Area of Search) (Winter)
- 5.27 Seabirds, Important Bird Areas and RSPB Reserves in West Hebrides (Mull & Islay) (Area of Search) (Breeding)
- 5.28 Fishing Intensity in the West Hebrides (Barra & Tiree) (Area of Search) (Scallop Dredge, Demersal Mobile Gear, and Nephrops Mobile Gear)
- 5.29 Fishing Intensity in the West Hebrides (Barra & Tiree) (Area of Search) (Pelagic, Demersal Static Gear, Nephrops Creels)

- 5.30 Fishing Intensity in the West Hebrides (Barra & Tiree) (Area of Search) (Brown Crab Creels, Lobster Creels, Squid)
- 5.31 Inshore Fisheries in the West Hebrides (Barra & Tiree) (Area of Search) (Mobile Gears)
- 5.32 Inshore Fisheries in the West Hebrides (Barra & Tiree) (Area of Search) (Static Gears)
- 5.33 Fishing Intensity in the West Hebrides (Mull & Islay) (Areas of Search) (Scallop Dredge, Demersal Mobile Gear, and Nephrops Mobile Gear)
- 5.34 Fishing Intensity in the West Hebrides (Mull & Islay) (Areas of Search) (Pelagic, Demersal Static Gear, Nephrops Creels)
- 5.35 Fishing Intensity in the West Hebrides (Mull & Islay) (Areas of Search) (Brown Crab Creels, Lobster Creels, Squid)
- 5.36 Inshore Fisheries in the West Hebrides (Mull & Islay) (Areas of Search) (Mobile Gears)
- 5.37 Inshore Fisheries in the West Hebrides (Mull & Islay) (Areas of Search) (Static Gears)
- 5.38 Wild Salmon & Sea Trout activities in the West Region
- 5.39 Interconnector cables in the West Region
- 5.40 Existing Infrastructure in the West Hebrides (Barra & Tiree) (Area of Search)
- 5.41 Existing Infrastructure in the West Hebrides (Mull & Islay) (Area of Search)
- 5.42 Oil and Gas activities in the West Hebrides (Barra & Tiree) (Area of Search)
- 5.43 Oil and Gas activities in the West Hebrides (Mull & Islay) (Areas of Search)
- 5.44 Recreational activity in the West Hebrides (Barra & Tiree) (Area of Search)
- 5.45 Recreational activity in the West Hebrides (Mull & Islay) (Areas of Search)
- 5.46 Recreational boating activity in the West Region
- 5.47 Recreational diving activities in the West Region
- 5.48 Dinghy Sailing Clubs in the West Region
- 5.49 Kayaking and Small Boat Activities in the West Region
- 5.50 Surfing and Windsurfing locations in the West Region
- 5.51 Ferry Routes in the West Region
- 5.52 Shipping activity in the West Hebrides (Barra & Tiree) (Area of Search)
- 5.53 Shipping activity in the West Hebrides (Mull & Islay) (Areas of Search)
- 5.54 Key tourist sites in the West Region
- 5.55 Cultural and Maritime Heritage Assets in West Region
- 5.56 Coastal awards in the West Region

# **TABLES**

6.4 6.5

2.1	Key projects in plans and environmental assessment
3.1 3.2 3.3 3.4	Planning Stage for Potential Infrastructure Projects Ports and Harbours in the East Region Key Surfing and Windsurfing Locations in the East Region Summary of future trends in East Region
4.1 4.2 4.3 4.4	Planning Stage for Potential Infrastructure Projects Ports and Harbours in the East Region Key Surfing and Windsurfing Locations in the North East Region Summary of future trends in North East Region
5.1 5.2 5.3 5.4	Planning Stage for Potential Infrastructure Projects Ports and Harbours in the North Region Key Surfing and Windsurfing Locations in the North Region Summary of future trends in North Region
6.1 6.2	Planning Stage for Potential Infrastructure Projects Ports and Harbours in the North West Region
6.3	Estimated Regional Sea Angling Activity and Expenditure in North West Region
6.4 6.5	Key Surfing and Windsurfing Locations in the North West Region Summary of future trends in North West Region