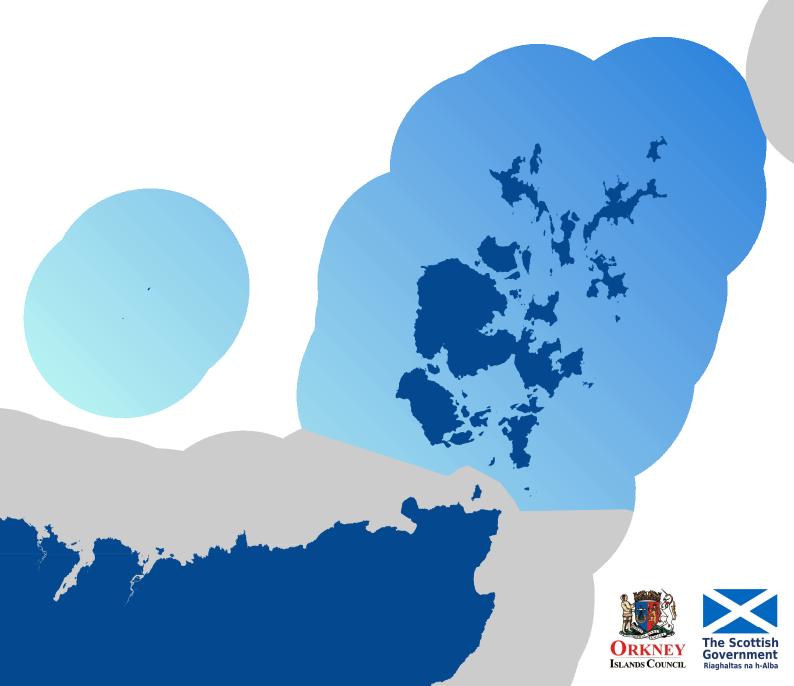
# Orkney Islands Regional Marine Plan Consultation Draft



Title	Orkney Islands Regional Marine Plan: Consultation Draft
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Responsible authority	Orkney Islands Council
Subject	Regional marine planning
Contact	Development and Marine Planning team: <a href="marine.planning@orkney.gov.uk">marine.planning@orkney.gov.uk</a>

#### Consultation on this draft Plan

The Orkney Islands Regional Marine Plan: Consultation Draft ("the Plan") and the associated assessments have been deposited for public consultation from 1 August to 25 October 2024. The consultation documents can be accessed at <a href="https://www.orkney.gov.uk/Marine-Plan-Consultation">www.orkney.gov.uk/Marine-Plan-Consultation</a>, Kirkwall Library & Archive, the Warehouse Buildings in Stromness or Customer Services, Orkney Islands Council, School Place, Kirkwall, KW15 1NY.

The deadline for responses to this consultation is 17:00 on 25 October 2024.

Representations about the Plan can be submitted to the Development and Marine Planning team at Orkney Islands Council, by email: <a href="marine.planning@orkney.gov.uk">marine.planning@orkney.gov.uk</a> or in writing: Development and Marine Planning, Orkney Islands Council, School Place, Kirkwall KW15 1NY. Respondents should provide responses using the Consultation Response Form.

Following the public consultation, the Plan will be modified in response to the comments received, and a report will be prepared detailing any modifications that have been made and the reasons for those modifications. The updated Plan will then be submitted to Scottish Ministers to seek approval to adopt and publish the final Plan.



### Foreword

The Orkney Islands Regional Marine Plan: Consultation Draft is a significant step forward for the protection of our marine waters whilst also supporting sustainable economic development in the Orkney Islands marine region. It provides a clear framework for decisions on how we use our marine space and sets out planning policies that will help to drive progress and innovation. The plan will support sustainable management of our marine environment and will help decision makers to guide sustainable development to the right places, whilst safeguarding our marine environment and quality of life for Orkney communities.

This Plan is a major milestone in supporting the delivery of the Blue Economy Vision for Scotland, ensuring action is taken to combat the twin crises of climate change and biodiversity loss, whilst supporting fair, prosperous, nature-positive marine sectors and communities. Climate change in particular is one of the most pressing issues facing the nation and can be felt amongst the fragile island communities around Orkney.

The preparation of the Plan has been undertaken utilising a collaborative approach, enabling a wide range of stakeholders, especially local communities, to work together across the Orkney archipelago to consider their marine priorities. This has enabled the people of Orkney to engage in the process of marine planning from the earliest stage. We would like to take the opportunity to acknowledge the commitment and input of local people. Their valuable range of expertise and knowledge has been a vital asset during the process of preparing this Plan.

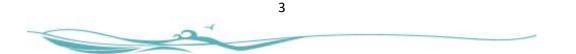
All of Scotland's society, including Orkney communities, the public sector, businesses and organisations will have a role to play in achieving our vision. With a shared ambition, we look forward to a prosperous future for the local community, and all of Scotland's citizens, visitors and future generations, who can all benefit from Orkney's very special marine environment and thriving economy.



Gillian Martin MSP,
Cabinet Secretary for Net Zero and Energy



Councillor Kristopher Leask,
Chair of Development &Infrastructure, Orkney Islands Council
Chair of Orkney Marine Planning Advisory Group



### **Executive Summary**

Our seas and coast are an integral part of day-to-day life in Orkney and play a significant role in the local economy, transportation, recreation and our unique way of life. This Orkney Islands Regional Marine Plan: Consultation Draft ('the Plan') marks an important milestone in the ongoing sustainable management of our marine environment.

Orkney Islands Council has prepared the Plan on behalf of Scottish Ministers in accordance with the Delegation of Functions (Regional Marine Plan for the Scottish Marine Region for the Orkney Islands) Direction 2020.

The Plan sets out an integrated planning policy framework to guide marine development and activities, whilst ensuring the quality of the marine environment is protected, and where appropriate, enhanced. It supports the delivery of a vision for Orkney's coastal and marine environment, economy and communities. This vision will be delivered through the Plan objectives and implementation of the Plan policies. To accord with the statutory purpose of a regional marine plan, the policies relate directly to public authority decision making on development and activities, and the consideration of use in the marine environment.

Public authorities must take any authorisation or enforcement decision in accordance with the appropriate marine plans, unless relevant considerations indicate otherwise. The appropriate marine plans are a national marine plan which is in effect, and for decisions that relate to a Scottish marine region, any regional marine plan which is in effect for the region. The Plan will be used by public authorities in the determination of relevant licences and consents.

The Plan's policy framework consists of a suite of general policies and a suite of sector policies. These policies express intent and guide decisions to achieve the Plan's aim and objectives and the delivery of sustainable development in Orkney. Once adopted, the implementation of the Plan will be monitored and evaluated to consider the extent to which the aim of the Plan and its objectives are being met. This monitoring and evaluation process will inform the ongoing review of the Plan's effectiveness, using appropriate indicators.



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### Section 1: Introduction

#### **Purpose of the Orkney Islands Regional Marine Plan**

- 1.1 This consultation draft Orkney Islands Regional Marine Plan ('the/this Plan') has been prepared to guide decision making that will contribute to the achievement of sustainable development, activities and use in the Orkney Islands marine region.
- 1.2 The Marine (Scotland) Act 2010 requires a regional marine plan to state the Scottish Ministers' policies for and in connection with the sustainable development of the area to which the plan applies and on the contribution of Nature Conservation Marine Protected Areas, and other relevant conservation sites, to the protection and enhancement of that area. The Plan is a regional marine plan prepared and adopted in accordance with this statutory purpose.
- 1.3 The Plan has been prepared by Orkney Islands Council as a single delegate, in accordance with the Delegation of Functions (Regional Marine Plan for the Scottish Marine Region for the Orkney Islands) Direction 2020. It has been prepared in conformity with the UK Marine Policy Statement 2011 and the National Marine Plan 2015. Steps have been taken to secure that the Plan is compatible with the development plan which includes the National Planning Framework 4 and the Orkney Local Development Plan 2017.
- 1.4 The Orkney Marine Planning Advisory Group has provided expert input on environmental, social, economic and recreation matters to inform the preparation of the Plan<sup>1</sup>. Collectively, Orkney Islands Council and the Orkney Marine Planning Advisory Group form the Orkney Marine Planning Partnership. For clarity, the delegated regional marine plan making functions remain with Orkney Islands Council as the single delegate identified in the Direction.

#### How to use the Plan policy framework

1.5 Marine planning and associated decision making requires careful balancing of considerations. This Plan contains policies to guide public authorities, including but not limited to, decision makers, consenting authorities, regulators, and planners, to make decisions on sustainable development and activities (see the definition of these terms in Table 1 and Appendix 7) within, or that affect, the Orkney Islands marine region (see Map 1).

Orkney Marine Planning Advisory Group
<a href="https://www.orkney.gov.uk/Service-Directory/D/marine-planning-advisory-group.htm">https://www.orkney.gov.uk/Service-Directory/D/marine-planning-advisory-group.htm</a>





- 1.6 Public authorities are required by the Marine (Scotland) Act 2010 to take authorisation or enforcement decisions in accordance with the appropriate marine plans, unless relevant considerations indicate otherwise. Public authorities are also required to have regard to the appropriate marine plans in making any other decision which relates to the exercise by them of any function capable of affecting the whole or any part of the Scottish marine area.
  2. The appropriate marine plans are a national marine plan which is in effect, and for decisions that relate to a Scottish marine region, any regional marine plan which is in effect for the region.
- 1.7 The Plan policies include provisions to guide public authority decision makers to contribute towards the delivery of the Plan objectives. The Plan policies aim to guide relevant decision making. It is for the relevant public authority decision maker to determine which policy, policies, or component of a policy, are relevant to a specific decision and what weight to attach to policies on a case by case basis.
- 1.8 The Plan policies should be applied proportionately by public authority decision makers. Decision makers need to consider whether the type, location and/or scale of a development or activity, and its associated impacts or effects, justify the application of a specific policy or a provision within a policy.
- 1.9 Appendix 1, which is not exhaustive, identifies relevant licence and consent regimes administered by public authorities to manage development and activities in the Orkney Islands marine region. These decision-making regimes are the primary mechanism for implementing the Plan's objectives and policies.
- 1.10 The Plan is structured into four sections:
  - 1. Introduction:
  - 2. General Policies:
  - 3. Sector Policies; and
  - 4. Monitoring, Evaluation and Review.
- 1.11 These sections are supported by appendices that provide further information to assist Plan users.
- 1.12 The Plan's policy framework consists of a suite of general policies and a suite of sector policies. These policies express intent and guide decisions to achieve the Plan's aim and objectives (see Table 2).
- 1.13 All the policies should be considered alongside the relevant legislation, policies and plans; key documents are outlined in Appendix 2, which is not exhaustive.

<sup>&</sup>lt;sup>2</sup> Marine (Scotland) Act 2010 <a href="https://www.gov.scot/publications/marine-scotland-act/">https://www.gov.scot/publications/marine-scotland-act/</a>



1.14 To enable the general and sector policies to be interpreted and implemented by decision makers, and clearly understood by other Plan users, Table 1 provides definitions of the key policy terms. Appendix 7 provides definitions of key concepts referred to in this Plan, along with a list of acronyms used and a glossary of other terms.

Table 1: Definition of key policy terms used in this Plan\*

Term	Definition
Activity/activities	Any activity/activities that require authorisation from a public authority, e.g. 'licensable marine activities' identified under the Marine (Scotland) Act 2010 and activities licensed under the Water Environment (Controlled Activities) (Scotland) Regulations 2011.
Authorisation or enforcement decision	The determination of any authorisation or any decision relating to enforcement as detailed and further expanded upon in the Marine (Scotland) Act 2010, section 15 <sup>3</sup> .
	Appendix 1, which is not exhaustive, contains relevant licensing and consent regimes, and associated processes, administered by public authorities to manage marine development and activities.
Development	Any construction, building, engineering, mining, other operation and/or works that require authorisation from a public authority. This can include new development, or alterations, extensions or changes in material use to existing development or land.
Use	Any legitimate use of the marine and/or coastal environment that is exercised under a public right and that does not require authorisation from a public authority, e.g. freedom of navigation for shipping or the exercise of public access rights for the purposes of recreation.
Marine and/or coastal user(s)	Legitimate users of the marine and/or coastal environment for purposes such as, but not limited to, fishing, aquaculture, shipping, transport, energy generation, utilities, recreation and other economic and/or community activities.

<sup>\*</sup>see Appendix 7 for a glossary of other terms and definitions of key concepts.

<sup>&</sup>lt;sup>3</sup> Marine (Scotland0 Act 2010 <a href="https://www.legislation.gov.uk/asp/2010/5/section/15">https://www.legislation.gov.uk/asp/2010/5/section/15</a>



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#### Vision, guiding principles, aim and objectives

- 1.15 Orkney's coastal and marine environment needs to be carefully managed to ensure it is clean, healthy, safe and productive, now and for future generations. This Plan aims to enable sustainable marine development, activities, and use in Orkney, whilst protecting, and where appropriate enhancing, the environment and associated ecosystems on which these undertakings, and local communities, depend.
- 1.16 Regional marine plans must set economic, social and marine ecosystem objectives, and objectives relating to mitigation of, and adaptation to, climate change.
- 1.17 The Plan's vision, guiding principles, aim and objectives are presented in Table 2. The vision statement declares the goal that is intended to be achieved through the implementation of the Plan. The Plan policies implement the aim and objectives. The vision will be achieved by implementing the Plan's aim and objectives, and associated policies, and monitoring and evaluating their effectiveness. Each of the Plan policies is supported by a table that identifies the objectives to which the policy contributes. Appendices 4 and 7 provide further information on the key concepts outlined in Table 2.



Table 2: Vision, guiding principles, aim and objectives of the Orkney Islands Regional Marine Plan

#### Vision

The Orkney Islands marine region is clean, healthy, safe and productive; Orkney's marine and coastal environment is rich in biodiversity and managed sustainably to support thriving and resilient local communities.

#### **Guiding principles**

The Orkney Islands Regional Marine Plan has been developed in accordance with five guiding principles adopted to help steer the plan-making process, strategy and policies.

Sustainable development, activities and use	
Sustainable development, activities, and use are enabled whilst living within environmental limits; ensuring a strong, safe, healthy and just society; achieving a sustainable economy; promoting good governance; using sound science responsibly; and supporting the delivery of the United Nations Sustainable Development Goals <sup>4</sup> .	
Ecosystem-based approach	
An ecosystem-based approach is used to manage human activities and enable climate change mitigation, as well as adaptation to the predicted effects of climate change.	
Coexistence	
Coexistence between marine development, activities, and use is supported to minimise potential conflict and maximise synergistic benefits.	
Partnership working and stakeholder participation	
This Plan is developed through an inclusive process of partnership working and stakeholder participation.	
Integrated approach to marine and land-use planning	
Land and marine development are planned in a joined-up way to address development and infrastructure requirements, and associated impacts, across the interface between land and sea.	

<sup>&</sup>lt;sup>4</sup> United Nations Sustainable Development Goals <a href="https://www.un.org/en/sustainable-development-goals">https://www.un.org/en/sustainable-development-goals</a>



#### Aim

Sustainable development, activities, and use of the marine and coastal environment of Orkney is supported.

Sustainable development, activities, and use should maintain, and where appropriate enhance, biodiversity and ecosystem services; protect natural capital for future generations; and provide social and economic benefits for local communities.

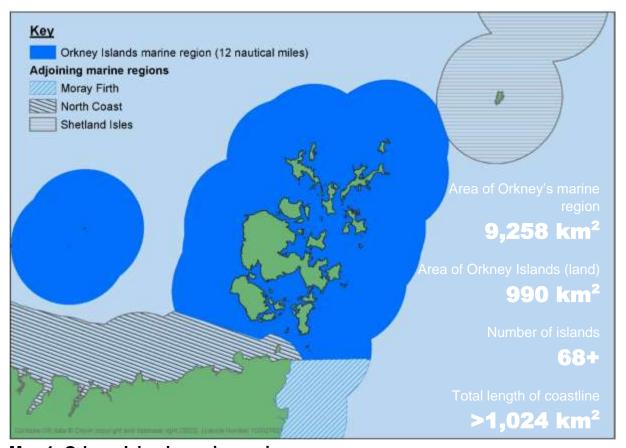
#### **Objectives**

Number	Objective
1	A clear strategic direction is provided for development, activities, and use in the Orkney Islands marine region and there is greater certainty for prospective developers, investors and local communities.
2	Development, activities, and use are managed within an ecosystem approach, to protect and, where appropriate, enhance the biological, chemical and physical functioning of the marine and coastal environment, including the management of cumulative impacts.
3	A rapid and just transition to a low-carbon economy is supported to achieve net-zero commitments.
4	Mitigation of, and adaptation to, climate change is supported.
5	Socio-economic benefits and prosperity are delivered for local communities and the wider economy.
6	The well-being of local communities and the amenity of marine and coastal places are protected and enhanced.
7	Reliable information is provided on existing and proposed coastal and marine development, activities, use and assets.
8	Spatial planning and data are provided, enabling sustainable coexistence and synergies between existing and new marine development, activities, and use, and the environment.
9	Plan users are assisted in navigating the relevant legislative and policy frameworks more easily and effectively.



#### Plan area

1.18 The Plan area is the Orkney Islands marine region (Map 1). This region extends from Mean High Water Springs (MHWS) out to the twelve nautical mile limit, which is an area of approximately 9258 km<sup>2</sup>; this is nearly ten times the Orkney Islands land area. This Orkney Islands marine region includes Sule Skerry and Sule Stack with their separate 12 nautical mile boundary. The Orkney Islands marine region was established by the Scottish Marine Regions Order 2015<sup>5</sup>.



Map 1: Orkney Islands marine region area

### Orkney Islands Marine Region: State of the Environment Assessment

1.19 To inform the preparation of this Plan, a baseline assessment was carried out, with key findings published in the Orkney Islands Marine Region: State of the Environment Assessment<sup>6</sup>. The assessment provides a snap-shot of the physical, environmental, social and economic condition of the Orkney Islands marine region, including a summary of significant pressures and impacts from

<sup>&</sup>lt;sup>6</sup> Orkney Islands Marine Region: State of the Environment Assessment <a href="https://www.orkney.gov.uk/Service-Directory/D/orkney-islands-marine-region-state-of-the-environment-assessment.htm">https://www.orkney.gov.uk/Service-Directory/D/orkney-islands-marine-region-state-of-the-environment-assessment.htm</a>



The Scottish Marine Regions Order 2015 https://www.legislation.gov.uk/ssi/2015/193/contents/made

human activities. In addition, Scotland's Marine Assessment<sup>7</sup> provides an assessment of both the state of Scotland's seas and the main activities and pressures in the various Scottish marine regions.

#### Spatial information and use of data

- 1.20 The Plan policies are supported by maps containing spatial information, which are presented alongside the relevant policy, where appropriate. In addition, the Plan's maps and other spatial information can be accessed on Marine Directorate of the Scottish Government's (Marine Directorate) National Marine Plan interactive (NMPi)<sup>8</sup>.
- 1.21 The spatial information and relevant reference information presented within the Plan are intended to guide decision makers and applicants seeking permission or consent. This information represents the best available data at the point of publication.
- 1.22 Knowledge and understanding of the Orkney Islands marine region will develop over time. Therefore, when using the Plan, it is important that NMPi is consulted for the most up-to-date spatial information; information on how to use NMPi is provided in Appendix 3.
- 1.23 As many of the issues and economic sectors addressed in this Plan are changing and evolving, new data, strategies and legislation will become available during the lifetime of the Plan. Whilst the most up-to-date information has been used to inform the plan-making process, data gaps and data redundancy are unavoidable. Users of this Plan should access the most up-to-date versions of any supporting data or documents referred to. The Plan will be reviewed every five years in accordance with statutory requirements (see Section 4), and new relevant information will be made available on the Orkney Islands Council website.



Scotland's Marine Assessment 2020 <a href="https://marine.gov.scot/sma/">https://marine.gov.scot/sma/</a>

<sup>8</sup> National Marine Plan interactive. Marine Scotland. http://maps.marine.gov.scot/

### Section 2: General Policies

#### Introduction

- 2.1 The suite of general policies provides a framework for decision making to help deliver the Plan's environmental, social, economic, marine ecosystem and community well-being objectives. These types of policies are often referred to as cross-cutting policies as they can be applied to many different types of decision, for example decisions on renewable energy, aquaculture or harbour developments, to address a specific policy issue e.g. nature conservation.
- 2.2 The general policies assist public authorities, including but not limited to, regulators, decision makers and planners, to make decisions on sustainable development and activities that take place within, or that affect, the Orkney Islands marine region.
- 2.3 The general policies should be applied proportionately by public authority decision makers. Decision makers need to consider whether the type, location and/or scale of a development or activity, and its associated impacts or effects, justify the application of a specific general policy or a provision within such a policy.
- 2.4 Sector policies are contained in Section 3.

#### **Policy structure**

- 2.6 Each policy has an introductory section detailing the intent and context for the policy, and key information about the topic that is particularly relevant to Orkney. The policy is then presented in a clearly defined policy box. The associated text for each policy includes supporting information that should be taken into account in relevant decision making.
- 2.7 Each policy is supported by an information box that outlines:
  - the contribution of the policy to the Plan objectives;
  - relevant information in the Orkney Islands Marine Region: State of the Environment Assessment; and
  - the policy's alignment with other key marine and land-use plans.
- 2.8 Where appropriate, the Plan policies are supported by spatial information in map form or by reference to other relevant spatial information (see Section 1 for details).

- 2.9 Appendix 1, which is not exhaustive, summarises the role of relevant public authority consenting and advisory bodies and identifies the key authorisation and enforcement decisions through which the Plan policies will be implemented.
- 2.10 A summary of the wider relevant legislation, policies and guidance that should be considered alongside this Plan is provided in Appendix 2, which is not exhaustive.

#### Impacts or effects from development and activities

- 2.11 The Plan policies aim to maximise positive impacts or effects from development and activities and appropriately manage adverse impacts or effects. The impacts or effects of marine development and activities are not limited to the site boundaries of a proposal; for example, sediment plumes arising from dredging activity can be transported long distances before being deposited. Impacts or effects can be temporary, permanent, direct, indirect, short term, medium term, long term and/or cumulative.
- 2.12 It is important to consider the cumulative impact of development and/or activities on the marine environment. Proposals for development and/or activities should consider cumulative impacts associated with relevant existing and proposed development and/or activities, not just those of the same type or sector. Where required, cumulative impacts or effects should be assessed in accordance with the requirements of the appropriate Environmental Impact Assessment (EIA) regulations.
- 2.13 The determination of what is a significant impact or effect should be made by the appropriate public authority decision maker. This judgement should be informed by relevant information and data, assessment, and the views of statutory consultees and wider stakeholders.
- 2.14 Impact or effect significance can be appraised by considering factors including the nature, size and location of the proposal, the potential pathways to impact, potential for cumulative impacts or effects, the significance and sensitivity of affected receptors (e.g. an environmental feature or infrastructure asset), and the magnitude of the impact or effect.
- 2.15 An overarching aim of the Plan's general and sector policies is to, in order of preference, avoid, minimise and/or appropriately mitigate any significant adverse impacts or effects that could be caused by proposed development and/or activities. This should be achieved by implementing the mitigation hierarchy (see Appendix 7a). The most effective mitigation measures are those which avoid or prevent the creation of adverse impacts or effects at source, and such measures should be identified during the project design stage. The aim of this approach is to prevent or avoid the adverse impacts or effects, if possible, and only then consider other mitigation measures. Where



- specific mitigation measures are required, these can be secured as part of the relevant consent and/or permission.
- 2.16 In addition to supporting appropriate mitigation measures, the Plan policies aim to support the delivery of environmental, social and economic benefits, enhancement and positive effects for biodiversity.

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#### General Policy 1: Sustainable development, activities, and use

#### **Policy intent**

To encourage, promote and facilitate sustainable development, activities, and use.

#### Context

- 2.17 Sustainable development, activities, and use in the marine environment is the fundamental aim of this Plan, in support of the UN Sustainable Development Goals and in conformity with the National Marine Plan 2015<sup>9</sup> and other relevant Scottish Government policy and guidance<sup>10</sup>. Living within our environmental limits is one of the central principles of sustainable development.
- 2.18 The Orkney Islands marine region is biologically diverse, productive and contributes significantly to the local and national economy. Orkney's marine and coastal environment needs to be protected and, where appropriate, enhanced to support the continued delivery of environmental, social and economic benefits for future generations. This Plan adopts an integrated approach to land-use and marine planning. It supports the balanced consideration of environmental, social and economic factors in decision making, and the implementation of the precautionary principle<sup>11</sup>.

<sup>&</sup>lt;sup>11</sup> Environment – guiding principles: statutory guidance <a href="https://www.gov.scot/publications/scotlands-guiding-principles-environment-statutory-guidance/documents/">https://www.gov.scot/publications/scotlands-guiding-principles-environment-statutory-guidance/documents/</a>



Scotland's National Marine Plan 2015 <a href="https://www.gov.scot/publications/scotlands-national-marine-plan/">https://www.gov.scot/publications/scotlands-national-marine-plan/</a>

Scotland and the Sustainable Development Goals Scotland and the sustainable development goals: a national review to drive action - gov.scot (www.gov.scot)

# General Policy 1: Sustainable development, activities, and use General Policy 1a: Supporting sustainable development

There is a presumption in favour of sustainable development, activities, and use when consistent with the policies and objectives of this Plan.

#### **General Policy 1b: Sustainable development principles**

Proposals for development and/or activities should demonstrate:

- i. that opportunities have been taken to maximise sustainable environmental, social and economic benefits;
- ii. that any significant adverse direct or indirect environmental, social, economic and/or historic environment impacts or effects have been avoided, minimised and/or appropriately mitigated;
- iii. that any significant adverse cumulative environmental, social, economic and/or historic environment impacts or effects have been avoided, minimised and/or appropriately mitigated;
- iv. the effective and efficient use of existing infrastructure and services;
- v. that they will not create an unacceptable burden on existing infrastructure and/or services that cannot be resolved as part of the consenting process;
- vi. that any significant adverse environmental, social, economic and/or operational effects on existing development, activities and/or use have been avoided, minimised and/or appropriately mitigated;
- vii. that sound science and/or evidence has been used responsibly in the design and assessment of such proposals.

#### **General Policy 1c: The precautionary principle**

The precautionary principle should be applied in decision making in accordance with relevant legislation and Scottish Government guidance.

Table 3: General Policy 1 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives	1, 2	
Indirect contribution to objectives	5	
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Whole assessment	
Alignment with other marine and land-use plans		
National Marine Plan 2015	Gen 1, Gen 4	
National Planning Framework 4	Policies 4 e) and 12 b)	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Sustainable Communities	

#### **General Policy 2: Safety**

#### **Policy intent**

To encourage, promote and facilitate safe development, activities, and use.

#### Context

- 2.19 Safety is an important consideration in all aspects of marine traffic, development and activities. As competition for marine space increases due to development, potential impacts on shipping and maritime safety will need to be reconciled. It is recognised that all vessels have the right of innocent passage and freedom of navigation. The safeguarding of routes used by shipping is essential for the viability of island communities.
- 2.20 The marine safety regime is underpinned by international safety, security and pollution-control regulations and codes issued by the International Maritime Organisation. A series of measures have been introduced to support safety at sea and protection of the marine environment, including conventions, recommendations and other instruments which are implemented in UK waters by the Maritime and Coastguard Agency (MCA).
- 2.21 Orkney Islands Council, as the statutory harbour authority (Orkney Harbour Authority), has responsibility for safety of navigation within harbour areas, and the MCA has responsibility for facilitating the safety of shipping and seafarers, saving lives, and protecting the maritime environment. Those proposing development and/or activities that could affect navigational safety or harbour operations should therefore liaise with the relevant authority in the early stages of planning.
- 2.22 Orkney Harbour Authority is responsible for the safe and efficient operation of 29 piers and harbours located throughout the Orkney Islands, and operates under the principles set out in the Port Marine Safety Code<sup>12</sup> ('the Code'). The Code sets out a national standard for every aspect of port marine safety. Whilst not mandatory, it is endorsed by the UK Government and the devolved administrations; these bodies have a strong expectation that all harbour authorities will comply. The Code is applicable both to statutory harbour authorities and to other marine facilities which may not have statutory powers and duties.
- 2.23 The Orkney Harbour Authority Marine Safety Management System accords with the Code and includes safety management systems maintained by other operators (e.g. towage and ferries) and commercial marine operations within

Port Marine Safety Code. 2016. https://www.gov.uk/government/publications/port-marine-safety-code-compliant-ports



- the Orkney harbour areas (e.g. Flotta Oil Terminal). Details can be found in the Orkney Harbour Authority Marine Safety Management System Manual<sup>13</sup>.
- 2.24 Orkney Islands Council has a duty under the Control of Major Accident Hazards Regulations 2015 (COMAH) to prepare an off-site emergency plan for the Flotta Oil Terminal, which is owned and operated by Repsol Resources UK Limited. The aim of the off-site emergency plan is to limit the consequences of any major accident or incident for people working and/or residing on the island of Flotta.
- 2.25 Under a memorandum of understanding between the Health and Safety Executive (HSE) and the MCA, there are consultation zones around licensed piers in Orkney, to help ensure that appropriate safety measures are in place relating to the transportation of hazardous goods. These piers and associated HSE consultation zones (see Map 2) are licensed by the HSE under the Dangerous Goods in Harbour Areas Regulations 2016. Planning authorities consult HSE directly for advice on developments located within consultation zones and developments in the vicinity of major accident hazard sites<sup>14</sup> (see Map 2).

#### **General Policy 2: Safety**

 The Orkney Harbour Authority should be consulted on proposals for development and/or activities that would have implications for any aspect of safety in harbour areas.

<sup>&</sup>lt;sup>14</sup> Control of Major Accident Hazards. Health and Safety Executive. https://www.hse.gov.uk/comah/



Marine Safety Management System Manual. Orkney Islands Harbour Authority. 2018. https://www.orkneyharbours.com/documents/safety-management-system-manual

Table 4: General Policy 2 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	6, 7	
Indirect contribution to objectives:	2	
Assessment of the condition of the C	Orkney Islands marine region	
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Sections 6.4 and 6.6.3	
Alignment with other marine and land-use plans		
National Marine Plan 2015	Safety is a cross-cutting policy matter within the National Marine Plan.	
National Planning Framework 4	Policy 23 g)	
Orkney's Regional Spatial Strategy (Indicative)	N/A	
Orkney Local Development Plan 2017	Policy 1 vi	

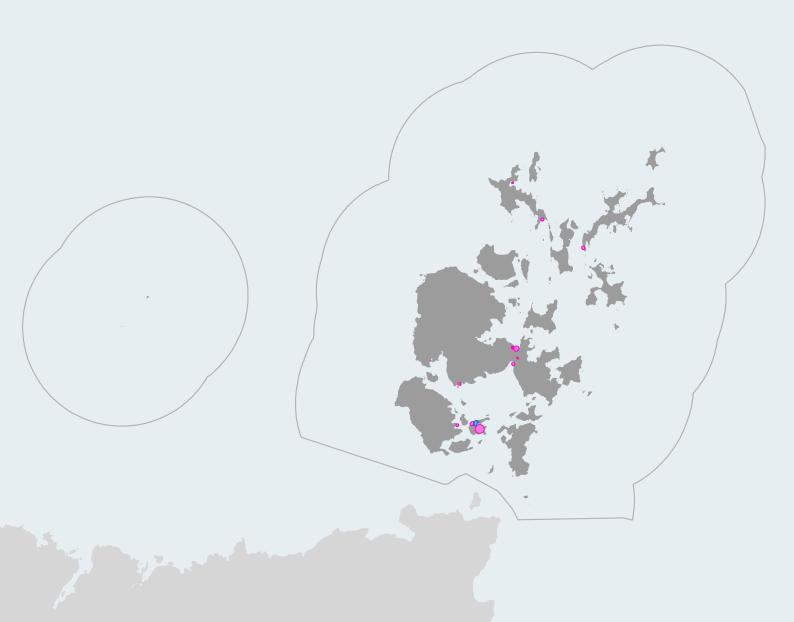
# Map 2: Health and Safety Executive consultation zones and COMAH site

#### Key

Health and Safety Executive (HSE) consultation zone

Control of Major Accident Hazards (COMAH) site

12 nm boundary



Map is indicative. An interactive version of the data in this map can be found on NMPi. Updated data sets may be added to NMPi when available.



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#### **General Policy 3: Climate change**

#### **Policy intent**

To encourage, promote and facilitate development, activities, and use that minimises emissions and adapts to the current and future impacts of climate change.

#### Context

- 2.26 Climate change is the most critical factor affecting Scotland's marine environment, businesses and coastal communities. Its effects are many and far-reaching, including changing weather patterns, sea level rise causing increased flooding and coastal erosion, and changes to the sea's temperature and acidification levels. All these factors affect the environment, economy, communities and species' ecology in numerous ways.
- 2.27 The world's oceans play a significant role in climate regulation, absorbing 93% of the heat that accumulates in the earth's atmosphere and around a quarter of the carbon dioxide released from fossil fuels. Ocean temperatures are predicted to rise between 1.5 °C and 4 °C<sup>15</sup>, with sea levels rising by between 1.01m and 1.07m around Orkney by 2100 under the high emissions scenario<sup>16</sup>.
- 2.28 This Plan supports carbon reduction measures, a rapid transition to zero carbon energy generation and fuels, climate change adaptation, sustainable economic development, activities, and use, and, alignment with public authorities' climate change duties. The Plan integrates with wider strategic policy to support the transformational change required to address the Global Climate Emergency the Climate Change Plan update, National Planning Framework 4, National Marine Plan 2015, and the Orkney Local Development Plan 2017 (see Appendix 2).
- 2.29 NPF4, published in February 2023, introduced a change in national planning policy by giving significant weight to the climate crisis in decision making on development proposals. This policy approach is not taken in National Marine Plan 2015. National Marine Plan 2015 policy GEN 5 Climate change states that marine planners and decision makers must act in the way best calculated to mitigate, and adapt to, climate change. The climate change legislation and

The Global Climate Emergency - Scotland's Response: Climate Change Secretary Roseanna Cunningham's statement. 2019. <a href="https://www.gov.scot/publications/global-climate-emergency-scotlands-response-climate-change-secretary-roseanna-cunninghams-statement/">https://www.gov.scot/publications/global-climate-emergency-scotlands-response-climate-change-secretary-roseanna-cunninghams-statement/</a>



<sup>&</sup>lt;sup>15</sup> Climate Change 2014: Synthesis Report. IPCC. <a href="https://www.ipcc.ch/report/ar5">https://www.ipcc.ch/report/ar5</a>

<sup>&</sup>lt;sup>16</sup> Dynamic Coast. <a href="https://www.arcgis.com/apps/dashboards/defe901982154099b6ceb1">https://www.arcgis.com/apps/dashboards/defe901982154099b6ceb1</a>9db8aa41a4

The Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Order. 2015. https://www.legislation.gov.uk/ssi/2015/347/contents/made

national planning policy introduced since 2015 are relevant considerations that indicative that a departure from the National Marine Plan 2015 on climate policy is appropriate in this Plan. Therefore, General Policy 3a: *Climate crisis* gives significant weight in decision making on development and activity proposals to the global climate crisis.

2.30 Climate change mitigation measures are those actions taken to reduce greenhouse gas emissions or re-capture previous emissions, while adaptation measures aim to reduce the vulnerability of people, infrastructure and/or nature to the effects of climate change. Mitigation, therefore, attends to the causes of climate change, while adaptation addresses its impacts<sup>19</sup>. Some climate change effects can be reduced by various mitigation measures, while adaptation measures can help limit the impact of climate change consequences that are already 'locked-in' due to past emissions. For example, blue carbon, which is the carbon stored in coastal and marine ecosystems, can play a role in mitigating climate change. The largest blue carbon source in the Orkney Islands marine region is inorganic carbon in sediments<sup>20</sup>. Blue carbon habitats such as tidal marshes and seagrass meadows can help to sequester and store carbon.

#### 2.31 Mitigation measures include:

- practising energy efficiency;
- displacing fossil-fuel use through greater and more diverse use of renewable energy, for example to electrify industrial processes or to support use of alternative energy for transport, such as hybrid or hydrogen ferries; and
- capture and storage of excess atmospheric carbon, particularly in natural and semi-natural habitats that provide numerous other benefits.

#### 2.32 Adaptation measures include:

- adapting existing and future coastal development, activities and infrastructure to be more resilient against climate change impacts, e.g. sea level rise:
- relocating facilities and infrastructure to secure locations, e.g. away from areas affected by coastal flooding and erosion;

<sup>&</sup>lt;sup>20</sup> Blue carbon audit of Orkney waters. Marine Scotland Data Publications. 2020. https://data.marine.gov.scot/dataset/blue-carbon-audit-orkney-waters



<sup>&</sup>lt;sup>19</sup> Sustainability For All. Acciona. <a href="https://www.activesustainability.com/climate-change/mitigation-adaptation-climate-change/">https://www.activesustainability.com/climate-change/mitigation-adaptation-climate-change/</a>

- research and development on possible climate change scenarios, e.g. modelling the effects of sea level rise in coastal areas or temperature impacts on the behaviour and distribution of commercially viable species;
- preventive and precautionary measures, e.g. emergency planning and flood warning systems;
- building capacity for more diverse marine and coastal business activities, enabling communities to adapt to climate-related stresses, both within sectors (e.g. fishers targeting a wider range of species) and between sectors (e.g. ability to shift to alternative activity); and
- safeguarding and, where appropriate, restoring blue carbon habitats as part of development and activities or habitat-enhancement projects<sup>21</sup>.
- 2.33 Enhancing local resilience to the effects of climate change is a key priority. Resilience is the capacity of social, economic and environmental systems to cope with a hazardous event, trend or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation<sup>22</sup>. A key part of the vision for this Plan is that Orkney's marine and coastal environment is managed sustainably to support thriving and resilient local communities.
- 2.34 The ecosystem services provided by a healthy functioning coastal and marine environment (e.g. coastal protection and carbon sequestration and storage) are under threat from the effects of climate change and other pressures. For example, disturbance of blue carbon habitats by development, activities, and use can release further emissions and reduce the capacity of these habitats to store and sequester carbon. On the other hand, habitat restoration measures have the potential to mitigate adverse effects of climate change. This is an example of climate change resilience. Appendix 4 provides further information on ecosystem services from coastal and marine habitats and species.
- 2.35 The Orkney Islands Marine Region: State of the Environment Assessment<sup>23</sup> provides information on the main climate change issues and pressures in Orkney's coastal and marine areas. These include sea level rise and coastal change, sea temperature increases, changes in salinity and acidification, flooding, and impacts on habitats that are potential blue carbon stores<sup>24</sup>.

Blue carbon audit of Orkney waters. Marine Scotland Data Publications. 2020. <a href="https://data.marine.gov.scot/dataset/blue-carbon-audit-orkney-waters">https://data.marine.gov.scot/dataset/blue-carbon-audit-orkney-waters</a>



<sup>&</sup>lt;sup>21</sup> United Nations Decade on Restoration. <a href="https://www.decadeonrestoration.org/">https://www.decadeonrestoration.org/</a>

Definitions adapted from IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability, Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. <a href="http://www.ipcc.ch/report/ar5/wg2/">http://www.ipcc.ch/report/ar5/wg2/</a>

The Orkney Islands Marine Region: State of the Environment Assessment. 2020 <a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen</a> v2.pdf

2.36 A Flood Risk Management Plan is produced by the Scottish Environment Protection Agency (SEPA) to identify areas of flood risk within each Local Plan District, including Orkney. This plan is then consulted upon with partners (known as Responsible Authorities) to identify actions to address the identified risks. The most recent Flood Risk Management Plan for the Orkney Local Plan District (LPD3) was produced in 2021<sup>25</sup>. In relation to flooding issues, SEPA can provide guidance on climate change adaptation requirements for development.

Flood risk management plans. 2021. SEPA. <a href="https://www2.sepa.org.uk/frmplans/documents/lpd3-orkney-frmp-2021.pdf">https://www2.sepa.org.uk/frmplans/documents/lpd3-orkney-frmp-2021.pdf</a>



#### General Policy 3: Climate change

#### **General Policy 3a: Climate crisis**

When considering proposals for development and/or activities, significant weight in decision making should be given to the global climate crisis including measures for mitigation and adaptation.

#### General Policy 3b: Climate change mitigation

Proposals for development and/or activities should demonstrate that measures have been taken to mitigate climate change including, where appropriate, measures to minimise life cycle greenhouse gas emissions over the proposal's life cycle as far as possible.

#### General Policy 3c: Climate change adaptation and resilience

Proposals for development and/or activities should demonstrate that:

- i. measures have been taken to adapt to climate change.
- ii. adequate climate change adaptation and resilience measures, including appropriate nature-based measures, have been built into the project over its lifetime.
- iii. they include, where appropriate, nature-based measures to enhance the resilience of infrastructure, coastal communities and/or the environment to the effects of climate change.



Table 5: General Policy 3 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives	3, 4	
Indirect contribution to objectives	1, 2, 5, 6, 7, 8	
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 4	
Alignment with other marine and land-use plans		
National Marine Plan 2015	GEN 5	
National Planning Framework 4	Policies 1 and 2	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Climate Emergency	
Orkney Local Development Plan 2017	Policies 12, 13	

#### General Policy 4: Supporting sustainable social and economic benefits

#### **Policy intent**

To encourage, promote and facilitate development, activities, and use that delivers sustainable social and economic benefits in local communities.

#### Context

- 2.37 Marine planning and decision making have an important role in enabling economic opportunities to be realised by supporting the achievement of national and local economic aspirations for sustainable economic growth. A significant challenge for marine planning and decision making is balancing the requirements of existing coastal and marine users, and the needs of growing, or potentially novel, economic sectors, to deliver sustainable environmental, social and economic benefits.
- 2.38 It is important that every community in Orkney should benefit from sustainable economic development opportunities. The growth of the marine economy should create jobs and economic activity in the North and South Isles, as well as the Mainland and barrier-linked island communities. Job creation and increased economic activity can have a transformative impact on the viability and sustainability of island communities.
- 2.39 General Policy 4 aims to support the delivery of the core principles of Community Wealth Building<sup>26</sup>. This approach prioritises local economic benefits and retaining wealth within local communities.

<sup>&</sup>lt;sup>26</sup> Community wealth building policy action. Scottish Government. <a href="https://www.gov.scot/policies/cities-regions/community-wealth-building/">https://www.gov.scot/policies/cities-regions/community-wealth-building/</a>



# General Policy 4: Supporting sustainable social and economic benefits General Policy 4a: Supporting sustainable social and economic benefits

Proposals for development and/or activities should demonstrate that:

- i. opportunities have been taken to maximise sustainable employment benefits and create skilled employment in local communities;
- ii. opportunities have been taken to support local businesses, supply chains and research and development;
- iii. opportunities have been taken to support synergistic benefits with the existing activities of other marine and coastal users; and
- iv. net social and economic benefits outweigh any significant adverse impacts on existing social and/or economic activities.

### General Policy 4b: Impacts on local infrastructure, services and other marine and coastal users

Developers should undertake early engagement with the local authority, any other relevant bodies, service providers and/or stakeholders if significant impacts on local infrastructure, services and/or the activities of other coastal and marine users are likely to result from proposed development and/or activities.

Table 6: General Policy 4 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	1, 5, 8	
Indirect contribution to objectives:	7, 9	
Assessment of the condition of the Orkney Islands marine region		
State of the Environment Assessment	Sections 6, 7	
baseline information:		
Alignment with other marine and land-use plans		
National Marine Plan 2015	GEN 1, 2, 3, 4	
National Planning Framework 4	Policy 25 a)	
Orkney's Regional Spatial Strategy	Strategic Priority: Thriving	
(Indicative)	Economy	
Orkney Local Development Plan 2017	Policies 1, 9, 12	



#### General Policy 5: Safeguarding natural capital and ecosystem services

#### **Policy intent**

To safeguard and enhance natural capital and ecosystem services.

#### Context

- 2.40 Orkney's marine environment is affected by multiple pressures from human activities. These pressures need to be effectively managed to prevent a decline in the health and functioning of natural capital assets and the many benefits local communities derive from these assets. This Plan aims to protect and enhance natural capital, biodiversity and ecosystem services for future generations.
- 2.41 The Orkney Islands Marine Region: State of the Environment Assessment<sup>27</sup> presents a summary of the environmental pressures and impacts of human activities affecting the Orkney Islands marine region. Many of the features that contribute to the health of the marine environment in Orkney are in relatively good condition. However, there are a number of concerns relating to climate change, impacts on biodiversity from a variety of anthropogenic sources, and an increasing demand for development and use of marine space.

**Natural capital** is the stock of renewable and non-renewable natural resources (e.g. animals, air, water, soils, minerals) that combine to yield a flow of benefits to people that are often referred to as ecosystem services.

2.42 As well as having its own intrinsic value, Orkney's coastal and marine environment provides a wide range of services and natural resources that support local communities, health and well-being, and underpin the economy. These are referred to as ecosystem services. For example, kelp beds in Orkney provide a habitat to support nursery grounds for fish, crustaceans and invertebrates and a diverse marine community. As well as protecting gene pools, kelp beds provide a regulatory service through carbon cycling and a cultural service through kelp's importance to the Orkney community for its heritage value<sup>28</sup>. In addition to considering impacts on individual receptors (e.g. a Priority Marine Feature), a more holistic approach should be taken to decision making on development and activities by considering potential

Oceans of Value. Scottish Wildlife Trust. <a href="https://scottishwildlifetrust.org.uk/our-work/our-projects/living-seas/oceans-of-value/">https://scottishwildlifetrust.org.uk/our-work/our-projects/living-seas/oceans-of-value/</a>



The Orkney Islands Marine Region: State of the Environment Assessment. 2020 <a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen</a> v2.pdf

impacts at an ecosystem scale, for example, impacts on prey species affecting the availability for predators to feed.

**Ecosystem services** are processes by which the environment produces resources that are utilised by humans, such as clean air, water, food, energy and materials. A well-functioning marine ecosystem supports these vital ecosystem services.

- 2.43 Marine biodiversity enhancement activities should have regard to the appropriate guidance provided by NatureScot<sup>29</sup>. During the lifetime of this Plan, Orkney Islands Marine Region: Natural Capital and Ecosystem Services Guidance may be adopted to guide the implementation of General Policy 5.
- 2.44 Appendix 4 identifies ecosystem services provided by the marine environment.

## General Policy 5: Safeguarding natural capital and ecosystem services

Proposals for development and/or activities should:

- demonstrate that any significant disturbance and/or degradation of coastal and marine natural capital and/or ecosystem services has been avoided, minimised and/or appropriately mitigated.
- ii. include, where appropriate, measures to maintain and enhance natural capital and ecosystem services.
- iii. have regard to the Orkney Islands Marine Region: Natural Capital and Ecosystem Services Guidance, where available.

Marine and coastal enhancement framework. 2022. NatureScot.
<a href="https://www.nature.scot/professional-advice/land-and-sea-management/managing-coasts-and-seas/marine-enhancement">https://www.nature.scot/professional-advice/land-and-sea-management/managing-coasts-and-seas/marine-enhancement</a>



Table 7: General Policy 5 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	2	
Indirect contribution to objectives:	4	
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Sections 2, 4, 5	
Alignment with other marine and land-use plans		
National Marine Plan 2015	Para 4.39, Annex A.	
National Planning Framework 4	Policy 3	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	Policy 9C	



#### **General Policy 6: Water environment**

#### **Policy intent**

To protect the water environment and improve the ecological status of coastal waterbodies.

#### Context

- 2.45 High quality marine waters and benthic habitats are essential for a healthy environment, a successful economy and recreational activities. It is vital to maintain and, where possible, enhance this quality, as it underpins the current and future growth of the marine economy and the well-being of local communities. A high-quality water environment supports rich biodiversity and a variety of essential ecosystem services. Under the Water Environment and Water Services (Scotland) Act 2003, Scottish Ministers and every public body and office-holder must, in exercising any functions, have regard to the desirability of protecting the water environment.
- 2.46 The Scotland River Basin District (Standards) Directions 2014<sup>30</sup> direct the Scotlish Environment Protection Agency (SEPA) regarding the application of environmental standards for the water environment including environmental standards for the purposes of assessing the ecological status of water bodies. Assessing Scotland's water environment use of environmental standards, condition limits and classification schemes Policy Statement<sup>31</sup> sets out how SEPA should implement the Water Environment and Water Services (Scotland) Act 2003, using the Directions from 2014.
- 2.47 The River Basin Management Plans (RBMP)<sup>32</sup>, coordinated by SEPA, promote sustainable water use, whilst protecting and improving the water environment. These plans cover inland waters, ground waters, lagoons and coastal waters out to three nautical miles. Therefore, there is a spatial overlap and a requirement for alignment and integration with regional marine plans. The local RBMP covers both Orkney and Shetland, and the current state of coastal waters are classed as good or high quality for Orkney (see Maps 3–5).

The River Basin Management Plan for Scotland 2021 – 2027. SEPA. https://www.sepa.org.uk/media/594088/211222-final-rbmp3-scotland.pdf



The Scotland River Basin District (Standards) Directions 2014. https://www.gov.scot/publications/scotland-river-basin-district-standards-directions-2014/

Implementing the Water Environment and Water Services (Scotland) Act 2003: Assessing Scotland's water environment - use of environmental standards, condition limits and classification schemes - Policy Statement. <a href="https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2014/08/implementing-water-environment-water-services-scotland-act-2003-assessing-scotlands/documents/00459630-pdf/00459630-pdf/govscot%3Adocument/00459630.pdf</a>

2.48 The classification of coastal waterbodies includes assessment of ecological, chemical and physical parameters, using available data, for factors including water quality and physical condition (i.e. the assessment of coastal engineering), as well as biological parameters, the presence of invasive nonnative species, and benthic monitoring results. The benthic environment is characterised by animal and plant communities with no, or slow, mobility that rely on the seabed to feed, hide, rest and reproduce, as well as by areas of high exposure with strong tidal influences. Developments that place structures on the seabed, or activities such as deposition from aquaculture, dredging and trawling, have the potential to cause removal of habitat, smothering and abrasion. If not managed appropriately, these developments and activities can have significant impacts on benthic habitats and species, including Priority Marine Features (see Appendix 5), and on some qualifying features of designated nature conservation sites.

#### **General Policy 6: Water environment**

Proposals for development and/or activities should:

- i. be accompanied by sufficient information to enable an assessment of the likely effects, including cumulative effects, on water quality and the benthic environment.
- ii. take existing activities in the proposed location into account and demonstrate early engagement with relevant stakeholders to ensure that suitable mitigation is provided for potentially incompatible activities, and where that is not possible, that they are not co-located.
- iii. not cause any waterbody to deteriorate in status nor prevent the achievement of objectives in the River Basin Management Plan for the Scotland river-basin district.
- iv. contribute, where possible, towards objectives to improve the ecological status\* of coastal waterbodies and the environmental standard\*\* of marine waters.
- \* Ecological status of surface waters in Europe
- \*\* EU policies to protect Europe's ocean, seas and coasts

Table 8: General Policy 6 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
<b>J</b>		
Direct contribution to objectives:	2, 8	
Indirect contribution to objectives:	7	
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 2.3	
Alignment with other marine and land-use plans		
National Marine Plan 2015	GEN 12	
National Planning Framework 4	Policy 22	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	Policy 9D	



# Map 3: Waterbody classification: water quality status

#### Key

#### **Overall water quality status**

High

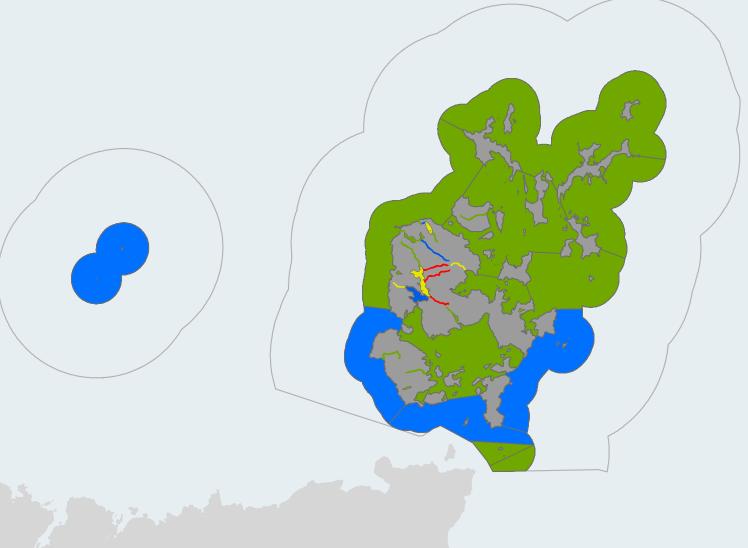
Good

Moderate

Poor

Bad

12 nm boundary



Map is indicative. For information on the water quality of specific water bodies visit:

https://www.sepa.org.uk/data-vi sualisation/water-classification-hub/



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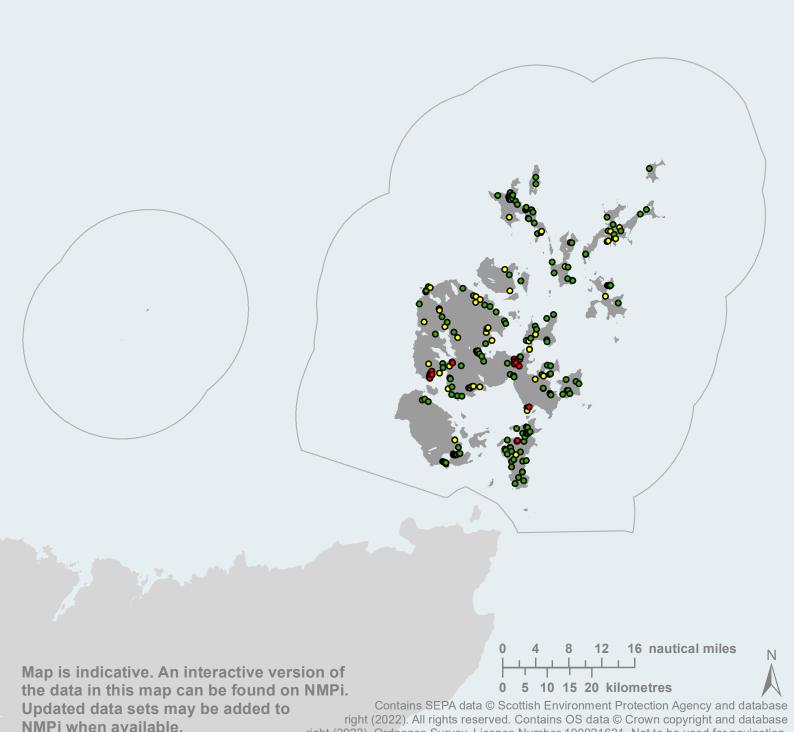
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# Map 4: Wastewater treatment works

#### Key

#### Wastewater treatment

- Overflow
- Private
- Public



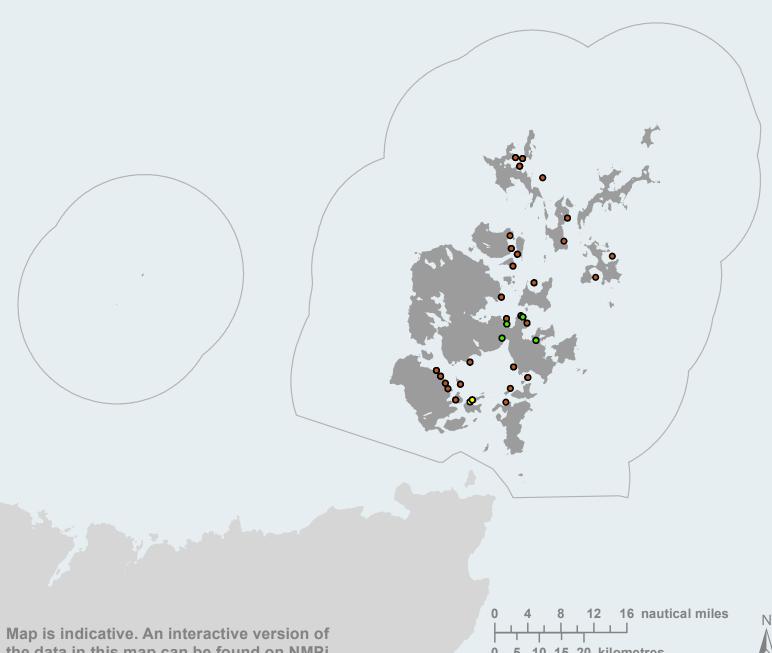
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# Map 5: Scottish Pollutant Release Inventory (SPRI) locations

#### Key

#### Sector

- Intensive livestock production and aquaculture
- Waste and wastewater management
- Energy sector
- 12 nm boundary



the data in this map can be found on NMPi. Updated data sets may be added to NMPi when available.



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#### General Policy 7: Coastal development and coastal change

#### **Policy intent**

To protect and enhance the coastal environment, communities and assets, and support resilience to the impacts of climate change.

#### Context

- 2.49The water masses of the North Sea and the Atlantic Ocean meet in Orkney waters producing diverse hydrodynamic conditions. The Sounds between the islands create extraordinarily strong tidal flows, and the exposed coasts experience powerful wave action. These forces create the geographical and physical diversity of Orkney's coast and associated habitats, species and marine resources.
- 2.50 Orkney's western seaboard is characterised by dramatic sea cliffs and associated arches, stacks, geos and gloups. The lower-lying coastal areas are dominated by tilted flags, dune systems and sandy bays. There are numerous indented bays that expose these lower-lying areas to coastal flooding and erosion. The main source of flooding in Orkney is from coastal flooding, which accounts for approximately 94% of the annual average damage by flood<sup>33</sup>.
- 2.51 Orkney Islands Council produces the Orkney Local Flood Risk Management Plan<sup>34</sup>. It outlines the various responsibilities and actions required of agencies such as SEPA, Scottish Water and the local authority to meet the objectives of the strategy. The primary responsibility to protect land from flooding, including coastal land, lies with the landowner.
- 2.52 Coast protection authorities, Orkney Islands Council in the case of Orkney, are permitted to undertake maintenance and emergency work under the terms of the Coast Protection Act 1949, and certain public bodies are expected to take a proactive role in managing and, where achievable, lowering overall flood risk. Local authorities have discretionary powers to carry out coast protection work that they consider to be necessary or expedient for the protection of any land in their area against erosion and encroachment by the sea.
- 2.53 Dynamic Coast<sup>35</sup> is a Scottish Government project that monitors Scotland's erodible shore. It has investigated coastal erosion and flood risk, under the Intergovernmental Panel on Climate Change high emissions, medium

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The River Basin Management Plan for Scotland 2021 – 2027. SEPA. https://www.sepa.org.uk/media/594088/211222-final-rbmp3-scotland.pdf

Local Flood Risk Management Plan for Orkney. Orkney Islands Council.
<a href="https://www.orkney.gov.uk/Service-Directory/F/local-flood-risk-management-plan.htm">https://www.orkney.gov.uk/Service-Directory/F/local-flood-risk-management-plan.htm#:~:text=The%20Local%20Flood%20Risk%20Management,these%20are%20to%20be%20funded</a>

<sup>35</sup> Dynamic Coast. https://www.dynamiccoast.com/

emissions and low emissions future scenarios. The data identifies coastal areas and assets at risk from coastal erosion and flooding. Since the 1970s, the average rate of coastal erosion has increased significantly in Orkney, particularly in areas of soft substrate, such as sand, soils and clays. In Orkney, 61% of the coast is categorised as hard, 36% is categorised as soft and 3% as artificial. Given that many of Orkney's settlements and infrastructure are in low-lying soft coast areas, there is a need to plan ahead for predicted sea level rise, and the increased risk of coastal erosion and flooding.

2.54 The Dynamic Coast project encourages Local Development Plan policy changes to ensure that any development avoids the disturbance or degradation of coastal landforms<sup>36</sup> and encourages society to become 'sea level wise'<sup>37</sup>. This work recognises the crucial role that habitats such as beaches, dune systems, saltmarshes and kelp beds play as natural defences against coastal erosion and flooding. Key sites such as the Bay of Skaill are particularly vulnerable, as Mean Low Water Springs in the southern third of the Bay has moved landward, with suggested associated increase in flood risk<sup>38</sup>.

Dynamic Coast: Erosion Enhanced Flooding. 2021. CREW <a href="https://www.dynamiccoast.com/files/dc2/">https://www.dynamiccoast.com/files/dc2/</a> DC2 WS1a Flooding FINAL.pdf



Looking ahead: planning for coastal change. 2019. NatureScot. <a href="https://www.nature.scot/sites/default/files/2019-05/Planning%20ahead%20for%20coastal%20change%20guidance.pdf">https://www.nature.scot/sites/default/files/2019-05/Planning%20ahead%20for%20coastal%20change%20guidance.pdf</a>

Dynamic Coast: The National Review. 2021. CREW. https://www.crew.ac.uk/sites/www.crew.ac.uk/files/publication/CREW\_DC2\_SYNOPSIS\_FINAL.pdf

#### General Policy 7: Coastal development and coastal change

#### **General Policy 7a: Coastal Development**

Proposals for development and/or activities located on, or directly adjacent to, the coast should have regard to:

- a. National Planning Framework;
- b. Orkney Local Development Plan;
- c. Orkney Local Flood Risk Management Plan;
- d. Coastal Change Adaptation Plan (if available); and
- e. Dynamic Coast data and maps.

#### **General Policy 7b: Coastal processes**

Proposals for development and/or activities that would significantly affect coastal processes should demonstrate that:

- i. significant adverse effects on coastal and marine habitats, species and geomorphological features, including, but not limited to, those that are caused by erosion, compaction, sediment transport, accretion, scouring, deposition and/or coastal flooding, have been avoided, minimised and/or appropriately mitigated.
- ii. significant adverse effects on coastal and marine infrastructure and other assets, due to coastal erosion, flooding and/or wider coastal change, have been avoided, minimised and/or appropriately mitigated.

#### **General Policy 7c: Coastal protection**

Development and/or activities proposals for coastal protection/defence measures should:

- i. be consistent with the policies and objectives of this Plan, the National Planning Framework, the National Marine Plan, Orkney Local Development Plan, Orkney Local Flood Risk Management Plan and any relevant Coastal Change Adaptation Plan.
- ii. have regard to the Dynamic Coast data and maps.
- iii. utilise nature-based solutions and permit managed future coastal change wherever practical.
- iv. demonstrate that any in-perpetuity hard defence measures are necessary to protect essential assets.
- v. avoid, minimise and/or appropriately mitigate significant adverse effects on habitats and coastal geomorphological features that provide significant coastal protection services for infrastructure and other assets, and should where appropriate, enhance the functioning of these habitats and features.

Table 9: General Policy 7 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan	objectives	
Direct contribution to objectives:	2, 4	
Indirect contribution to objectives:	9	
Assessment of the condition of the C	Orkney Islands marine region	
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 2.2	
Alignment with other marine and land-use plans		
National Marine Plan 2015	GEN 8	
National Planning Framework 4	Policies 5 a) and 10	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Sustainable Communities	
	Strategic Priority: Climate Emergency	
Orkney Local Development Plan 2017	Policy 13	

49

#### **General Policy 8: Historic environment**

#### **Policy intent**

To protect and enhance the historic environment.

#### Context

- 2.55 The historic environment includes any physical evidence of human activity through time. Orkney is world renowned for the quality and quantity of its historic environment assets, both terrestrial and marine. This policy addresses impacts from development and/or activities on the historic environment. The impacts of physical processes on the historic environment, such as erosion and storm damage, which are likely to be exacerbated by climate change, are further addressed in General Policies 3 and 7.
- 2.56 Archaeological records in Orkney date back as early as c.7000 BC, and include Neolithic settlements and tombs, Iron Age tower houses of the broch villages, and a rich Viking heritage of international significance. More recently, Orkney played a pivotal role in both World Wars, leaving poignant reminders of these turbulent periods etched on our seascape and coastal areas in the shape of wrecks, barriers, gun emplacements and concrete bunkers. The wrecks of the German High Sea Fleet in Scapa Flow are afforded protection as scheduled monuments; and there is a proposed Scapa Flow Historic Marine Protected Area in recognition of its nationally important marine historic assets.
- 2.57 Examples of important historic environment assets around Orkney include the Heart of Neolithic Orkney World Heritage Site; scheduled monuments; listed buildings; gardens and designed landscapes; and controlled sites and protected places, including designated military maritime graves. The seabed is also of palaeo-environmental interest, particularly areas that were once dry land during ice age conditions and where there is potential for a wide range of buried deposits of archaeological interest. Drowned palaeolandscapes are rare in Scotland and are a distinctive feature of Orkney's marine heritage.
- 2.58 Historic environment assets (both designated and non-designated) are of historical, cultural, economic and recreational interest to Orkney communities and to the thousands that come to visit the islands. It is therefore vital for Orkney to protect its historic environment wherever possible. Canmore provides an online catalogue to Scotland's designated and undesignated archaeology, buildings, industrial and maritime heritage<sup>39</sup>.
- 2.59Many historic assets are afforded legal protection through various national and international designations. The Historic Environment Policy for Scotland is

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<sup>&</sup>lt;sup>39</sup> CANMORE National Record of the Historic Environment https://canmore.org.uk/

- also a key policy consideration for decision making in the whole of the historic environment<sup>40</sup>
- 2.60 Planning and licensing authorities are advised by Historic Environment Scotland on matters affecting historic environment assets, and the licensing requirements for controlled sites and protected places are administered by the Ministry of Defence (see Map 6 and Appendix 1).
- 2.61 The National Register of Historic Vessels provides an overview of the UK's surviving historic vessels<sup>41</sup>.

#### **General Policy 8: Historic environment**

Proposals for development and/or activities affecting historic environment should, where relevant, have regard to:

- a. National Planning Framework;
- b. Orkney Local Development Plan;

#### General Policy 8a: All Development and/or activities

- i. Proposals for development and/or activities with a potentially significant impact on historic assets or place should be accompanied by an assessment\* which is based on an understanding of the cultural significance of the historic asset and/or place. The assessment should identify the likely visual or physical impact of any proposals for change, including cumulative effects and provide a sound basis for managing the impacts of change.
- ii. Proposals should also be informed by national policy and guidance on managing change in the historic environment, and information held within Historic Environment Records.
- iii. Proposals for development and/or activities should, where appropriate, include a Protocol for Accidental Archaeological Discoveries (PAD)\*\*.

\*See: Historic Environment Scotland, Environmental Impact Assessment Handbook

\*\*For example: The Crown Estate, 03-PAD Offshore Renewables

<sup>&</sup>lt;sup>41</sup> The National Register of Historic Vessels https://www.nationalhistoricships.org.uk/the-registers/find-a-vessel



<sup>&</sup>lt;sup>40</sup> Historic Environment Policy for Scotland (HEPS). HES. https://www.historicenvironment.scot/advice-and-support/planning-and-guidance/historic-environmentpolicy-for-scotland-heps/

#### **General Policy 8b: Recording**

- Where developments and/or activities are permitted in areas known to contain, or where there are reasonable grounds to believe they contain, archaeological deposits, conditions may be attached to a licence or consent to ensure the effective assessment, analysis, archiving and publication of any archaeological remains to an agreed timeframe.
- ii. Where a historic environment asset, or a significant element thereof, will be lost as a result of a development and/or activity, it may be necessary to record the site to an agreed level prior to the commencement of development and/or demolition.

#### General Policy 8c: Heart of Neolithic Orkney World Heritage Site

 Proposals for development and/or activities affecting the Heart of Neolithic Orkney World Heritage Site or its setting should demonstrate that the Outstanding Universal Value\*\*\* is protected and preserved.

\*\*\* Heart of Neolithic Orkney Statement of Outstanding Universal Value

#### **General Policy 8d: Historic marine protected area (Historic MPA)**

Development and/or activities capable of affecting a Historic MPA will be managed in accordance with the requirements of the Marine (Scotland) Act 2010.

#### General Policy 8e: Controlled sites and protected places

The protection of controlled sites and protected places will be managed in accordance with the requirements of the Protection of Military Remains Act (1986).

#### **General Policy 8f: Scheduled monuments**

Proposals for development and/activities that will affect scheduled monuments should:

- i. avoid direct impacts on the scheduled monument; and
- ii. avoid significant adverse impacts on the integrity of the setting of the scheduled monument; or
- iii. demonstrate that there are exceptional circumstances to justify the impact on the scheduled monument and/or its setting, and that impacts on the monument or its setting have been minimised.

#### **General Policy 8g: Listed buildings**

- Development and/or activities proposals for the reuse, alteration or extension
  of a listed building should preserve its character, special architectural or
  historic interest and setting;
- Development and/or activities proposals affecting the setting of a listed building should preserve its character, and its special architectural or historic interest.

#### **General Policy 8h: Conservation areas**

Proposals for development and/or activities in or affecting a conservation area should preserve or enhance the character and appearance of the conservation area and its setting. Relevant considerations include the:

- i. architectural and historic character of the area;
- ii. existing density, built form and layout; and
- iii. context and siting, quality of design and suitable materials.

Proposals for development and/or activities in or affecting conservation areas should ensure that existing natural and built features which contribute to the character of the conservation area and its setting are retained.

#### General Policy 8i: Inventory gardens and designed landscapes

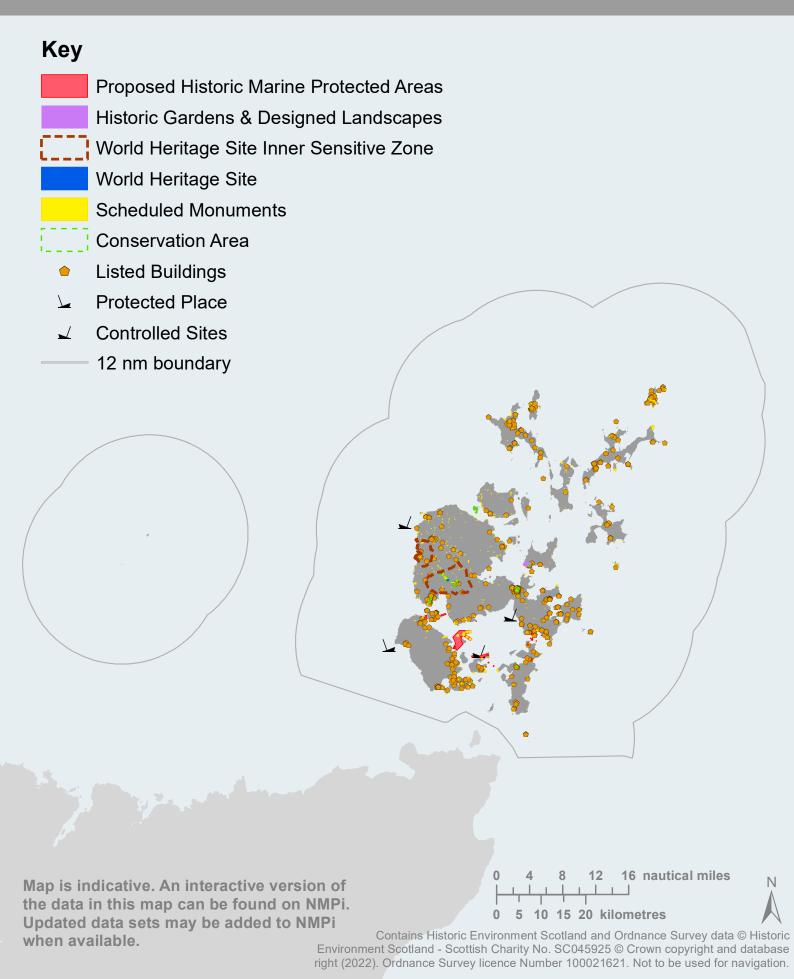
Development and/or activities should preserve or enhance the character and features of inventory gardens and designed landscapes and their setting. Development and/or activities should not have a significant adverse impact upon the character of these areas.



Table 10: General Policy 8 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	5, 6, 7	
Indirect contribution to objectives:	9	
Assessment of the condition of the C	orkney Islands marine region	
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 5	
Alignment with other marine and land-use plans		
National Marine Plan 2015	Gen 6	
National Planning Framework 4	Policy 7	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	Policy 8	

# Map 6: Protected coastal and marine historic environment assets



#### **General Policy 9: Nature**

#### **Policy intent**

To protect and enhance biodiversity and the health of the natural environment.

#### **Context: Background**

- 2.62 The Orkney Islands marine region is home to a range of internationally, nationally and locally important marine and coastal natural heritage features and designated sites. As well as its conservation importance, a healthy, biodiverse marine environment is essential for providing ecosystem services, enhancing well-being and supporting a sustainable marine economy. Further information on the importance and condition of the natural heritage in the region can be found within the Orkney Islands Marine Region: State of the Environment Assessment<sup>42</sup>.
- 2.63 The Global Assessment Report on Biodiversity and Ecosystem Services<sup>43</sup> has highlighted significant pressures on global biodiversity; this significant issue is referred to in this Plan as the nature crisis. Some of the drivers of biodiversity loss include changing use of land and sea, direct exploitation of organisms, and climate change.
- 2.64 Under the Nature Conservation (Scotland) Act 2004, public bodies in Scotland have a duty to further the conservation of biodiversity, so far as is consistent with the proper exercise of their functions.
- 2.65 The Environment Strategy for Scotland<sup>44</sup> sets an ambitious vision for 2045: 'By restoring nature and ending Scotland's contribution to climate change, our country is transformed for the better, helping to secure the wellbeing of our people and planet for generations to come.' Steps to deliver this vision are set out in the Scottish Biodiversity Strategy Post-2020: A Statement of Intent<sup>45</sup> which signals the Scottish Government ambitions for tackling the twin crises of climate change and biodiversity loss. There is scope for marine planning policy to reflect the 2045 target set out above, in the way that it guides

Scottish biodiversity strategy post-2020: statement of intent. Scottish Government. https://www.gov.scot/publications/scottish-biodiversity-strategy-post-2020-statement-intent/documents/



The Orkney Islands Marine Region: State of the Environment Assessment. 2020 <a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen v2.pdf">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen v2.pdf</a>

Global Assessment Report on Biodiversity and Ecosystem Services. 2019. IPBES. <a href="https://ipbes.net/global-assessment">https://ipbes.net/global-assessment</a>;

The Environment Strategy for Scotland: vision and outcomes. 2020. Scottish Government. https://www.gov.scot/publications/environment-strategy-scotland-vision-outcomes/documents/

- development, activities and use of the marine and coastal environment, including potential enhancement<sup>46</sup>.
- 2.66 NPF4, published in February 2023, introduced a change in national planning policy by giving significant weight to the global nature crisis in decision making on development proposals. This policy approach is not taken in National Marine Plan 2015. The Scottish Biodiversity Strategy and national planning policy introduced since 2015 are relevant considerations that indicative that a departure from the National Marine Plan 2015 on nature policy is appropriate in this Plan. Therefore, General Policy 9a: *Nature crisis* gives significant weight in decision making on development and activity proposals to the global nature crisis.

#### **Context: Protected sites**

2.67 In order to protect key natural assets, marine and coastal sites can be designated to provide varying degrees of protection for biological and/or geological natural features and may be of international, national or regional/local importance (see Table 11 and Maps 7–8). Appendix 2 of the Orkney Islands Marine Region: State of the Environment Assessment<sup>47</sup> contains a list of all Orkney's designated sites and their site condition, along with information on the qualifying features.

Table 11: Hierarchy of designated sites in Orkney

International sites:	
Special Areas of Conservation and Special Protection Areas	Special Protection Areas (SPAs), designated for birds, and Special Areas of Conservation (SACs) taken together are commonly known as European sites. They are designated and protected in Scottish law through the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994. These Regulations are referred to as the 'Habitats Regulations' and cover the requirements for protected European sites as well as those for 'European Protected Species'.
Ramsar	Internationally important wetland areas are protected under the Ramsar Convention on Wetlands of International Importance. For Ramsar sites, the Scottish Government has chosen as a matter of policy to apply the same considerations to their protection as if they were SPAs and SACs. Refer to Map 7 for all site locations.

Marine Restoration and Enhancement <a href="https://www.nature.scot/professional-advice/land-and-sea-management/managing-coasts-and-seas/marine-enhancement">https://www.nature.scot/professional-advice/land-and-seas/marine-enhancement</a>

The Orkney Islands Marine Region: State of the Environment Assessment. 2020 <a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen</a> v2.pdf



National sites:	
Nature Conservation Marine Protected Areas	Nature Conservation Marine Protected Areas (Nature Conservation MPAs) are regions of the sea and coast where nationally important species, habitats and geomorphology are protected. Nature Conservation MPAs are designated under the Scottish and UK Marine Acts and complement marine components of sites designated under other legislation to form a network of MPAs <sup>48</sup> .
Sites of Special Scientific Interest	Sites of Special Scientific Interest (SSSIs) are notified for biological features, including coastal and marine birds, as well as geological or geomorphological features and extend from land to Mean Low Water Springs.
	Refer to Map 7 for site locations.
Seal haul-out sites	Seal haul-out sits are designated in the Seals (Designation of Haul-Out Sites) (Scotland) Order 2015 through powers under section 117 of the Marine (Scotland) Act 2010. They are locations on land where seals come ashore to rest, moult or breed and which have been designated by Scottish Ministers to provide additional protection for seals from intentional or reckless harassment. Seal haul-out sites were designated through the Seals (Designation of Haul-Out Sites) (Scotland) Order 2014.
	Refer to Map 8 for site locations.
Seal conservation areas	Orkney is a Seal Conservation Area designated by Scottish Ministers under the Marine (Scotland) Act 2010.
Regional/local sites:	
Geological Conservation Review	Geological Conservation Review (GCR) sites contain geological and geomorphological features of national and international importance. There are sixteen GCR sites in Orkney, eleven of which have statutory protection through designation as SSSIs. However, five GCR sites have no protective SSSI designation status and are known as unnotified GCR sites.

Different types of MPAs in Scotland. NatureScot. <a href="https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/marine-protected-areas/scotlands-marine-protected-area-network">https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/marine-protected-area-network</a>



Local Nature Conservation Sites	Local Nature Conservation Sites (LNCS) are non-statutory sites identified by local authorities for their locally important natural heritage interest. Some of Orkney's LNCS have a coastal and/or intertidal component.
	Refer to Orkney Local Development Plan and supporting guidance for site locations and associated planning policy.

- 2.68 Plan users should refer to the Conservation and Management Advice documents for relevant designated sites within the MPA network, which include the site conservation objectives, advice to support management, and best practice advice<sup>49</sup>.
- 2.79 During the lifetime of this Plan, Orkney Islands Marine Region: Marine Restoration and Enhancement Guidance may be adopted to support the implementation of General Policy 9: *Nature*.

#### **Context: Protected Species**

- 2.70 Wildlife in Scotland is protected by a range of national and international legislation designed to protect rare and vulnerable species as well as their breeding and resting places. The Habitats Regulations 1994 afford protection to certain species listed in Annex IV of the Habitats Directive and are called 'European Protected Species' (EPS). Marine EPS whose natural range incorporates the Orkney Islands marine region include European otter and cetaceans (whales, porpoises and dolphins).
- 2.71 The Wildlife and Countryside Act 1981 is the primary legislation which protects animals, plants and certain habitats in Scotland. The 1981 Act makes it an offence to either intentionally or recklessly damage, destroy, obstruct or disturb any such place the animals in Schedule 5 use for shelter and protection. It also protects the animals listed in Schedule 5 from being taken, killed or injured, either intentionally or recklessly. Schedule 5 species present in Orkney waters include basking shark and fan mussel.

#### **Context: Priority Marine Features**

2.72 The Orkney Islands Marine Region: State of the Environment Assessment<sup>50</sup> notes that the broadscale seabed habitats are dominated by coarse sediment (52%), sublittoral sand (24%) and circalittoral rock (13%); these habitats support a variety of biodiversity, including Priority Marine Features (PMFs).

The Orkney Islands Marine Region: State of the Environment Assessment. 2020 <a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen v2.pdf">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen v2.pdf</a>



<sup>&</sup>lt;sup>49</sup> Scotland's register of European sites. SiteLink, NatureScot: <a href="https://sitelink.nature.scot/home">https://sitelink.nature.scot/home</a>

2.73 PMFs are species and habitats which have been identified as being of conservation importance to Scotland. PMFs range from flame shell beds in coastal waters to the cold-water coral reefs in deeper seas and mobile species such as minke whale and basking shark. Appendix 5 identifies the PMFs recorded within the Orkney Islands marine region. National records of PMF locations are on the National Marine Plan interactive (NMPi).

#### **General Policy 9: Nature**

#### General Policy 9a: Nature crisis

When considering proposals for development and/or activities, significant weight in decision making should be given to the global nature crisis.

## General Policy 9b: Biodiversity enhancement and positive effects for biodiversity

Proposals for development and/or activities should:

- i. contribute to the enhancement of coastal and/or marine biodiversity, where appropriate.
- ii. have regard to the biodiversity enhancement and positive effects for biodiversity policy provisions in the National Planning Framework.
- iii. have regard to the Orkney Islands Marine Region: Marine Restoration and Enhancement Guidance, where available.

#### **General Policy 9c: Protected areas**

#### Internationally designated sites

 i. Proposals for development and/or activities that could affect a European site (Special Area of Conservation and Special Protection Areas) must comply with the relevant legislation.

#### Nationally designated sites

- ii. Proposals for development and/or activities that could affect a SSSI must comply with the relevant legislation for these protected areas.
- iii. Proposals for development and/or activities that could affect a Nature Conservation MPA (NC MPA) must comply with the relevant legislation for these protected areas.

#### Seal haul-out sites

iv. Proposals for development and/or activities that could affect a designated seal haul-out site should demonstrate that they will not result in harassment of seals. Regard should be given to the Harassment at Seal Haul-out Sites: Guidance\*.

\*See: Guidance on Haul-outs, Scottish Government

#### **Local Nature Conservation Sites**

v. Proposals for development and/or activities that could affect a Local Nature Conservation Site should have regard to the Orkney Local Development Plan.

#### **General Policy 9d: Priority Marine Features**

a) Assessment of impacts on Priority Marine Features

Proposals for development and/or activities should avoid, minimise and/or appropriately mitigate significant adverse impacts on Priority Marine Features.

b) Impacts on the national status of Priority Marine Features

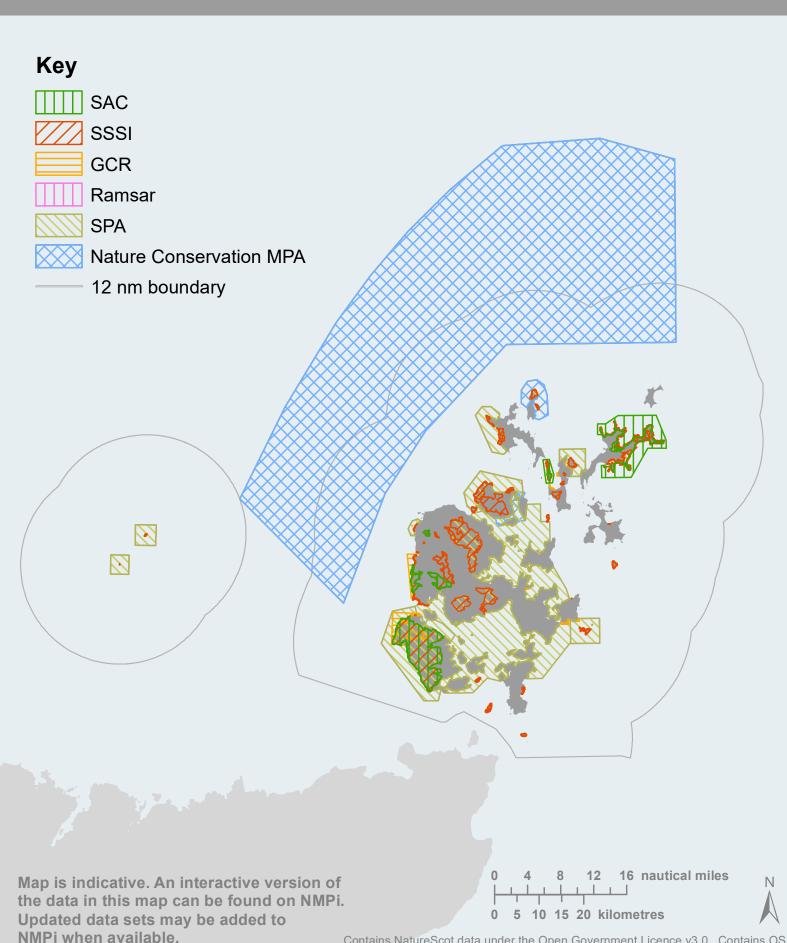
Development and/or activities should not result in significant adverse impacts on the national status of a Priority Marine Feature(s)\*.

\*Priority Marine Feature Guidance, NatureScot

Table 12: General Policy 9 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	2, 7, 9	
Indirect contribution to objectives:	6, 8	
Assessment of the condition of the C	Orkney Islands marine region	
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 5	
Alignment with other marine and land-use plans		
National Marine Plan 2015	Gen 9	
National Planning Framework 4	Policy 3	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	Policy 9 A–C	

# Map 7: International and national nature conservation sites



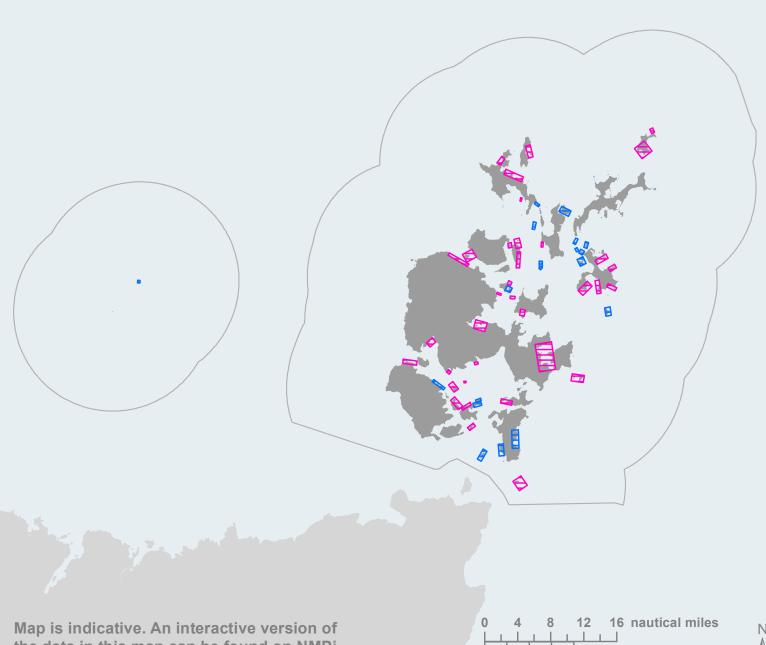
# Map 8: Designated seal haul-out sites

#### Key

Breeding colony seal haul-out

Seal haul-out

12 nm boundary



the data in this map can be found on NMPi. Updated data sets may be added to NMPi when available.





#### General Policy 10: Seascape and landscape

#### **Policy intent**

To protect and enhance the distinctiveness and qualities of seascape and landscape.

#### Context

- 2.74 Orkney's coastline contains world-class seascape and landscape, ranging from shallow sandy bays to dramatic high cliffs, to partially enclosed sounds, reflecting a strong physical and visual interplay between land and sea (see Map 9). This is well represented among the many Special Qualities of the Hoy and West Mainland National Scenic Area (see Map 10), in particular its 'spectacular coastal scenery' and the fact that 'land and water [are experienced] in constantly changing combinations under the open sky'51.
- 2.75 Each island in Orkney has its own seascape and landscape character, which creates variety and contributes to both an individual and a collective sense of identity, as outlined in the Coastal Character Assessment Orkney and North Caithness<sup>52</sup>.
- 2.76 The distinctiveness of Orkney's islands and waters creates a corresponding variety of seascapes and landscapes worthy of protection. Not only are they part of the spectacular scenery, they also contribute significantly to a sense of place, wellbeing and quality of life, as well as being a major economic asset for Orkney.

Coastal Character Assessment - Orkney and North Caithness. 2016. NatureScot. https://www.nature.scot/doc/coastal-character-assessment-orkney-and-north-caithness



The special qualities of the National Scenic Areas. SNH Commissioned Report No.374. 2010. https://www.nature.scot/doc/naturescot-commissioned-report-374-special-qualities-national-scenic-areas

#### General Policy 10: Seascape and landscape

#### General Policy 10a: All development and/or activities

Development and/or activities should be located, sited and designed to avoid, minimise and/or appropriately mitigate significant adverse impacts on the landscape, townscape and seascape characteristics and sensitivities identified in the Orkney and North Caithness Landscape Character Assessment\*, and should have regard to the natural and/or historic features that contribute to the quality of seascape and landscape.

\*Coastal Character Assessment - Orkney and North Caithness | NatureScot

#### General Policy 10b: National Scenic Area

Development and/or activities that would affect the Hoy and West Mainland National Scenic Area should demonstrate that:

- i. the objectives of the designation and the overall integrity of the area will not be compromised; or
- ii. any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance.

#### **General Policy 10c: Wild Land Area**

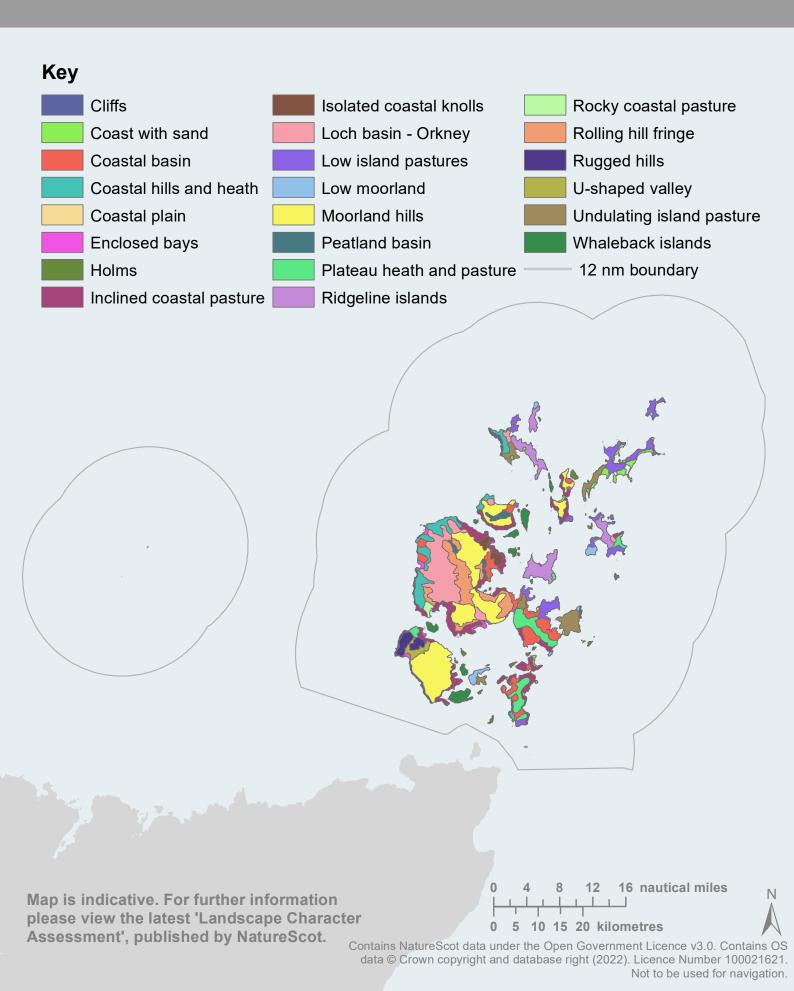
Development and/or activities affecting the Hoy Wild Land Area should have regard to National Planning Framework.



Table 13: General Policy 10 links to Plan objectives, state of the environment assessment and other plans

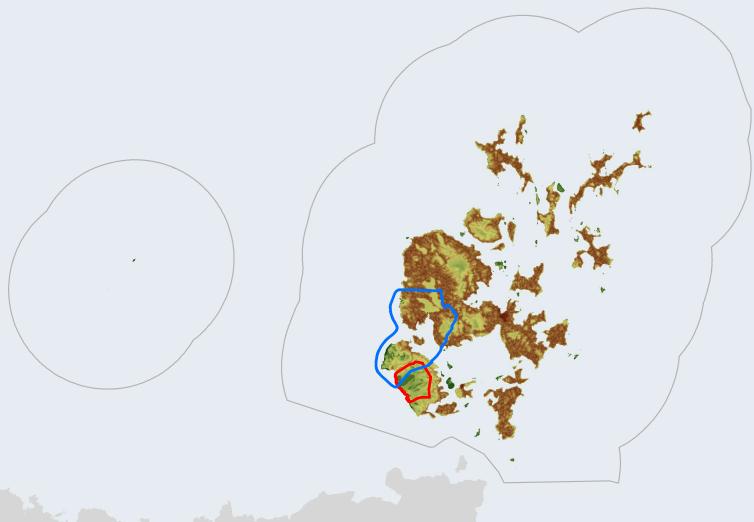
Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	2, 6	
Indirect contribution to objectives:	5, 8	
Assessment of the condition of the C	Orkney Islands marine region	
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 2.8	
Alignment with other marine and land-use plans		
National Marine Plan	GEN 7	
National Planning Framework 4	Policy 4	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	Policy 9G	

## Map 9: Landscape character types



# Map 10: National Scenic Area and Wild Land Area

# Key National Scenic Area Wild Land Area 12 nm boundary SNH Relative Wildness High Low



Map is indicative. An interactive version of the data in this map can be found on NMPi. Updated data sets may be added to NMPi when available. Relative Wildness data is available from NatureScot.



#### General Policy 11: Surface and underwater noise, and vibration

#### **Policy intent**

To protect local communities and marine species from adverse noise and vibration impacts.

#### Context

2.77 Coastal and marine development and activities can have associated noise, vibration and pressure wave impacts. As the number and variety of marine developments, activities and uses increases, addressing the cumulative impacts of anthropogenic noise and vibration will be a significant issue for marine planning and decision making.

#### Local communities

2.78 Construction and operational noise and/or vibration, both surface and underwater, caused by development, activities, or use, can impact on local communities. For example, surface fish farm electricity generators or harbour piling activity can affect the enjoyment of an area by residents or people wishing to walk, swim or dive.

#### Noise sensitive species

- 2.79 Surface and underwater noise and vibration is a growing pressure for many marine species worldwide. Shipping, military exercises, renewable energy development, piling, and acoustic deterrent devices used in aquaculture can disturb a variety of marine and coastal species.
- 2.80 European Protected Species, such as porpoise and orca, and Priority Marine Features, such as mackerel and flapper skate, are sensitive to underwater noise, as are seals. In addition, fish and invertebrates of biodiversity and commercial importance can also be affected by underwater noise<sup>53</sup>. Impacts vary with different frequencies and depending on the nature and duration of the activity<sup>54</sup>.
- 2.81 Around Orkney's marine waters, there has been little comprehensive study of the quantity and levels of underwater noise; this was identified as a data gap in the Orkney Islands Marine Region: State of the Environment Assessment. Subsequently, however, some underwater noise modelling was undertaken for the Scapa Flow and Kirkwall areas, as part of the assessment undertaken for the Orkney Harbours Masterplan Phase 1. These data outline injury

Good Practice Guide for Underwater Noise Measurement. National Measurement Office, Marine Scotland, The Crown Estate, Robinson, S.P., Lepper, P. A. and Hazelwood, NPL Good Practice Guide No. 133. 2014 <a href="https://www.npl.co.uk/special-pages/guides/gpg133underwater">https://www.npl.co.uk/special-pages/guides/gpg133underwater</a>



Impacts of noise on the behavior and physiology of marine invertebrates: A meta-analysis. Murchy, K.A et al 2019. https://asa.scitation.org/doi/pdf/10.1121/2.0001217

thresholds for different species from both impulsive and continuous sound. As new research and information becomes available, General Policy 11 will be updated to reflect this.

2.82 Due to Orkney's extensive military past, old munitions are still occasionally found; these tend to be dealt with by way of controlled explosion on safety grounds. There is a joint UK Protocol for In-Situ Underwater Measurement of Explosive Ordnance Disposal for UXO<sup>55</sup>. UXO stands for Unexploded Ordnance.

Situ Underwater Measurement of Explosive Ordnance Disposal for UXO.pdf



70

Protocol for In-Situ Underwater Measurement of Explosive Ordnance Disposal for UXO. Department for Business, Energy & Industrial Strategy. 2020.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/9552\_04/NPL\_2020\_- Protocol\_for\_In-

### General Policy 11: Surface and underwater noise, and vibration

#### **General Policy 11a: Local communities**

- i. Proposals for development and/or activities should include sufficient measures to avoid, minimise and/or appropriately mitigate significant adverse noise and/or vibration impacts on the local communities.
- ii. A Noise Impact Assessment\* may be required where the nature of the proposal or its location suggests that significant effects are likely.
  - \*Assessment of noise: technical advice note: Scottish Government

#### **General Policy 11b: Noise sensitive species**

- i. Proposals for development and/or activities that could cause noise, vibration and/or pressure wave impacts should include an assessment of the likely noise, vibration and/or pressure wave effects at an early stage of a proposal, to determine whether a noise, vibration and/or pressure wave management plan is required.
- ii. Development and/or activities should avoid, minimise and/or appropriately mitigate significant adverse noise, vibration and/or pressure wave impacts on Priority Marine Features.



Table 14: General Policy 11 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	2, 6	
Indirect contribution to objectives:	N/A	
Assessment of the condition of the C	orkney Islands marine region	
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 2.12	
Alignment with other marine and land-use plans		
National Marine Plan 2015	GEN 13	
National Planning Framework 4	Policies 11 e), 12 d) and 23 e)	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	N/A	

## **General Policy 12: Marine litter and waste**

## **Policy intent**

To encourage, promote and facilitate sustainable waste management and the prevention and removal of coastal and marine litter.

#### Context

- 2.83 Public understanding of the impacts of marine litter has grown exponentially over recent years. The problem is mainly caused by a range of persistent, slowly degrading materials such as plastics, microplastics, metals and glass, which can circulate across great distances. In the Orkney Islands marine region and around the world, by far the most commonly found litter at sea and washed ashore is plastic,<sup>56, 57</sup> which forms around 75% of all marine debris globally<sup>58</sup> (see Map 11).
- 2.84 Litter poses a threat to a wide range of wildlife in the form of ingestion, entanglement and smothering, which already results in the deaths of hundreds of thousands of seabirds and marine mammals globally each year,<sup>59</sup> including species in Orkney<sup>60</sup>. Marine debris can also pose a navigational hazard, is unsightly, and is an economic burden on affected communities. Most plastic debris found in the ocean enters via land-based sources, with tributaries and burns transporting litter from further inland to the marine environment<sup>61</sup>. However, in Orkney, there is no clear evidence on the sources of marine litter.
- 2.85 Marine Directorate of the Scottish Government published an updated Marine Litter Strategy in 2022<sup>62</sup> as part of its overall approach to marine planning and management. The National Litter and Flytipping Strategy sets out a refreshed approach to tackling litter and flytipping in order to protect and

<sup>&</sup>lt;sup>62</sup> A Marine Litter Strategy for Scotland <u>Marine Scotland: A Marine Litter Strategy for Scotland</u> (www.gov.scot) Marine Scotland



The Orkney Islands Marine Region: State of the Environment Assessment. 2020
<a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen</a> v2.pdf

Marine litter policy. Scottish Government. <a href="https://www2.gov.scot/Topics/marine/marine-environment/litter">https://www2.gov.scot/Topics/marine/marine-environment/litter</a>

Marine Debris: Understanding, Preventing and Mitigating the Significant Adverse Impacts on Marine and Coastal Biodiversity. Technical Series No.83. Secretariat of the Convention on Biological Diversity <a href="https://www.cbd.int/doc/publications/cbd-ts-83-en.pdf">https://www.cbd.int/doc/publications/cbd-ts-83-en.pdf</a>

Factsheet: Marine pollution. United Nations Ocean Conference. 2017. https://sustainabledevelopment.un.org/content/documents/Ocean Factsheet Pollution.pdf

Plastic particles in fulmar stomachs in the North Sea. OSPAR Intermediate Assessment. 2017. https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/pressures-human-activities/marine-litter/plastic-particles-fulmar-stomachs-north-sea/

<sup>&</sup>quot;Where does the plastic in our oceans come from?" Our World in Data. 2021 https://ourworldindata.org/ocean-plastics

enhance Scotland's environment<sup>63</sup>. In support of the Scottish Government's commitment to reduce marine litter, General Policy 12 aims to put in place measures to avoid and minimise the risk of development and activities contributing to marine litter in the Orkney Islands marine region. Implementing waste management measures and the waste reduction hierarchy<sup>64</sup> will help to generate less waste and ensure that waste is disposed of in ways that do not harm the marine environment. Public authorities are also encouraged to proactively engage in local litter reduction and monitoring schemes, including appropriate involvement in community organised events such as Orkney's 'Bag the Bruck'.

- 2.86 Marine waste refers to waste streams generated from marine development and activities, which require licensed disposal.
- 2.87 Many wider initiatives to address marine litter and waste in Orkney are being addressed through other measures, strategies and management plans, and users of this Plan should consider these accordingly. These include but are not limited to:
  - The International Convention for the Prevention of Pollution from Ships (MARPOL)<sup>65</sup>, which strictly prohibits the discharge of all litter into the sea.
  - The Port Waste Management Plan operated by Orkney Islands Council Marine Services<sup>66</sup>, which ensures that all ship-generated waste and cargo residue is controlled at all of the authority's piers and harbours.

Port Waste Management Plan. Orkney Island Council Marine Services. 2020. https://www.orkneyharbours.com/documents/port-waste-management-plan



<sup>63</sup> National Litter and Flytipping Strategy - gov.scot (www.gov.scot)

Applying the waste hierarchy: guidance. Scottish Government. 2017.
<a href="https://www.gov.scot/publications/guidance-applying-waste-hierarchy/pages/3/">https://www.gov.scot/publications/guidance-applying-waste-hierarchy/pages/3/</a>

In July 2011, IMO adopted amendments to Annex V (Prevention of Pollution by Garbage from Ships) which prohibits the discharge of all garbage into the sea, except as provided otherwise, under specific circumstances. 'Garbage' means all kinds of victual, domestic and operational waste, excluding fresh fish and parts thereof, generated during the normal operation of the ship and liable to be disposed of continuously or periodically, except sewage originating from ships.

Table 15: General Policy 12 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	6	
Indirect contribution to objectives:	2	
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 2.11	
Alignment with other marine and land-use plans		
National Marine Plan 2015	GEN 11	
National Planning Framework 4	Policy 12	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	Policy 1 viii	

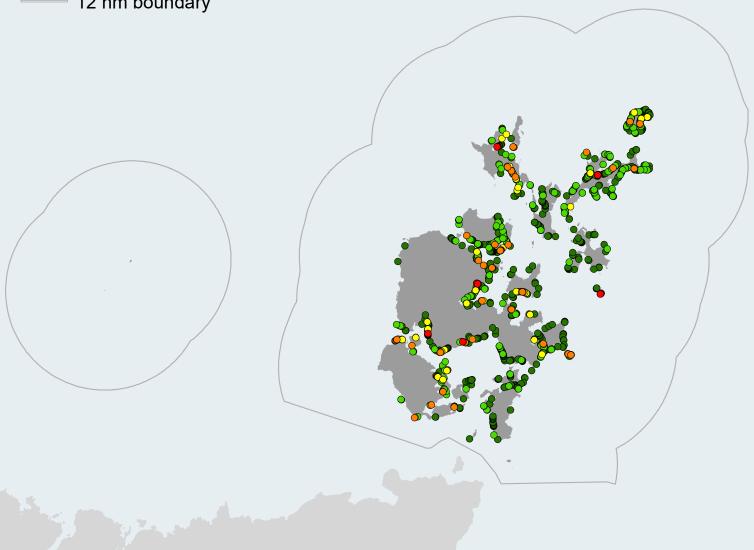
# Map 11: SCRAPbook coastal litter survey

# Key

## **Litter Presence**

- Low densities; single items or minor accumulations
- Medium densities; significant accumulations in localised areas
- Appearing widespread with significant accumulations
- Major accumulations in localised areas
- Major and widespread accumulation

12 nm boundary



Map is indicative. An interactive version of the data in this map can be found on NMPi. Updated data sets may be added to NMPi when available.





# **General Policy 13: Non-native and invasive non-native species**

# **Policy Intent**

To minimise the risk posed by non-native and invasive non-native species and associated effects on the marine environment and economy.

#### Context

- 2.88 Non-native species (NNS) are those that have been intentionally or unintentionally introduced outside their native range as a consequence of human activity. Once established, if these species then threaten biodiversity and/or cause economic damage, they are referred to as 'invasive' non-native species (INNS). Impacts of INNS include, but are not limited to, competition with native species over resources, changes to habitat and/or water quality, and transmission of disease. All these factors can be exacerbated by climate change.
- 2.89 The Great Britain Invasive Non-native Species Strategy<sup>67</sup> provides an overarching framework to minimise the risk posed by INNS in Great Britain and reduce their negative impacts. The first principle in tackling this issue is prevention. The Scottish Government's Non-native Species: Code of Practice<sup>68</sup>, and the references contained therein, provides guidance on the various control orders and agreements that may be required, including information on pathways for the potential spread of INNS.
- 2.90 Locally, the Ballast Water Management Policy for Scapa Flow (2017)<sup>69</sup> sets out a management strategy to address the introduction and spread of INNS, which will be instrumental in mitigating the impact of, and adapting to, any non-native species discovery in local marine waters around the key harbour areas.
- 2.91 Pathways for the introduction and spread of INNS include renewable energy and aquaculture development, shipping and marine litter. Good biosecurity practice should consider the risk of planned development and activities establishing new pathways for the spread of INNS<sup>70</sup>. The Clean Check Dry

Scotland's National Marine Plan. Scottish Government. 2015. https://www.gov.scot/publications/scotlands-national-marine-plan/



<sup>&</sup>lt;sup>67</sup> The Great Britain Invasive Non-native Species Strategy. DEFRA, The Scottish Government, Llywodraeth Cymru. 2015.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/4555\_26/gb-non-native-species-strategy-pb14324.pdf

Non-native Species: Code of Practice. Scottish Government. 2012

Non-native species: code of practice - gov.scot (www.gov.scot)

Ballast Water Management. Orkney Islands Council Harbour Authority. https://www.orkneyharbours.com/services/ballast-water-management

- campaign is broadly applicable for a range of water users as an additional biosecurity measure<sup>71</sup>.
- 2.92 Invasive non-native stoats pose a significant threat to Orkney's native coastal wildlife communities, many of which are already under threat. As stoats are excellent swimmers and can cross open sea to a distance of 3km, they put seabird populations of national importance, such as puffin, Arctic tern and red-throated diver, at risk on currently stoat-free islands. The Orkney Native Wildlife Project is working to safeguard native wildlife through the eradication of stoats from the islands and will prepare a biosecurity plan to safeguard Orkney's native wildlife into the future.

# **General Policy 13: Non-native and invasive non-native species**

- i. Proposals for development and/or activities should demonstrate that the potential risks of introducing or spreading non-native species (NNS)/invasive non-native species (INNS) have been adequately considered, having regard to the Scottish Government Non-native Species: Code of Practice\*. A sitespecific biosecurity plan may be required.
- ii. Appropriate prevention measures should be put in place when:
  - a. moving, maintaining and cleaning equipment or boats.
  - b. moving and/or introducing fish and shellfish and other farmed species such as seaweed.
  - introducing structures suitable for settlement of aquatic NNS/INNS or which facilitate the movement of terrestrial NNS/INNS, including to islands.
  - d. undertaking habitat enhancement or restoration activities.
- iii. Proposals for development and/or activities in areas where NNS/INNS are known to exist should include necessary measures or a biosecurity plan approved by the consenting authority or regulator that seeks to minimise the risk of spreading the NNS/INNS or identifies ways to eradicate the organisms and prevent their reintroduction. Where appropriate, measures within a biosecurity plan should include surveying and ongoing monitoring in areas where NNS/INNS are known to exist, and any subsequent spread of NNS/INNS should be notified to Marine Scotland.
  - \*Non-native species: code of practice, Scottish Government

<sup>71 &#</sup>x27;Check Clean Dry' campaign. GN Non-Native Species Secretariat. https://www.nonnativespecies.org/what-can-i-do/check-clean-dry/



Table 16: General Policy 13 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plar	n objectives	
Direct contribution to objectives:	2	
Indirect contribution to objectives:	4	
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of	Section 5.8	
the Environment Assessment baseline		
information		
Alignment with other marine and land-use plans		
National Marine Plan 2015	GEN 10	
National Planning Framework 4	N/A	
Orkney's Regional Spatial Strategy	Strategic Priority: An	
(Indicative)	Outstanding Environment and	
	Quality of Life	
	Strategic Priority: Thriving	
	Economy	
Orkney Local Development Plan 2017	Section 13.5	

# General Policy 14: Amenity, wellbeing and quality of life of local communities

### **Policy Intent**

To protect and enhance the amenity, wellbeing and quality of life of local communities.

#### Context

- 2.93 Orkney is valued by local communities as a unique and special place to live and work. There are many factors that contribute to the quality and enjoyment of a place and the resulting sense of community wellbeing. Studies of marine spatial planning processes<sup>72</sup> have shown that capturing wider values, including cultural values linked to, for example family and village history, together with the biodiversity qualities of a region, is of vital importance to coastal communities. General Policy 14 aims to ensure that consideration is given to safeguarding the amenity, wellbeing and quality of life of local communities.
- 2.94 Building a Wellbeing Economy is now a national policy priority in Scotland<sup>73</sup> and is core to the National Strategy for Economic Transformation<sup>74</sup>.
- 2.95 Amenity, in planning terms, refers to the positive elements that contribute to the overall character and/or enjoyment of an area by residents, visitors and other users.
- 9.96 Identifying the factors that contribute to the amenity, wellbeing and quality of life of local communities is essential, but challenging, to address in marine planning policy and decision making, particularly doing so in a way that can integrate place-based perspectives linked to local knowledge<sup>75</sup>. It is therefore important to engage effectively with local communities when preparing proposals for development and activities that could have significant effects on their amenity, wellbeing and quality of life. This engagement can help to identify relevant factors that contribute towards the amenity, wellbeing and quality of life of local communities, and how these factors can be affected by development or activity proposals.

<sup>75</sup> Ibid.



<sup>&</sup>lt;sup>72</sup> Bente Sundsvold and Claire W. Armstrong 'Found in translation: identifying ecosystem services through public consultation statements in a marine spatial planning process' (2019) 15:1 *Ecosystems and People* 102

https://www.tandfonline.com/doi/full/10.1080/26395916.2019.1596982

Wellbeing Economy Governments (WEGo). Scottish Government. <a href="https://www.gov.scot/groups/wellbeing-economy-governments-wego/">https://www.gov.scot/groups/wellbeing-economy-governments-wego/</a>

Scotland's National Strategy for Economic Transformation. Scottish Government. 2022. https://www.gov.scot/news/scotlands-national-strategy-for-economic-transformation/

2.97 Marine and coastal recreation can contribute not only to human health and wellbeing, but also significantly to the economy<sup>76</sup>. Thus, the quality of the marine environment and its natural capital links directly to the socio-economic benefits provided to society<sup>77</sup>.

# General Policy 14: Amenity, wellbeing and quality of life of local communities

# **General Policy 14a: Engaging local communities**

- i. Proposals for development and/or activities should demonstrate that local community stakeholders have been appropriately engaged, and listened to, at an early stage in the development process when assessing impacts on the amenity, well-being and quality of life of local communities and, where appropriate, opportunities for enhancement measures.
- ii. Co-creation, with local community stakeholders, of appropriate mitigation to address impacts on amenity, wellbeing and quality of life of local communities, and where appropriate, enhancement measures is encouraged.

#### General Policy 14b: Benefits for local communities

Proposals for development and/or activities should, where possible, maximise opportunities to deliver amenity, wellbeing and quality of life benefits for local communities.

#### **General Policy 14c: Amenity**

Proposals for development and/or activities should:

- i. avoid, minimise and/or appropriately mitigate, significant adverse effects on amenity due to factors including, but not limited to, waste, noise, air quality, light and odour.
- ii. include sufficient mitigation plans to address significant effects on amenity.
- iii. be designed to a high standard and quality, so that the nature and scale of the development and/or activities contribute positively to the character and sense of place of the area in which they are to be located
- iv. demonstrate that regard has been given to the Six Qualities of Successful Places\*, where appropriate.

\*National Planning Framework 4: Annex D – Six Qualities of Successful Places

Emily Stebbings, Eleni Papathanasopoulou, Tara Hooper, Melanie C. Austen, Xiaoyu Yan, 'The marine economy of the United Kingdom' (2020) 116 Marine Policy 103905. https://www.sciencedirect.com/science/article/pii/S0308597X19307390





Table 17: General Policy 14 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	5, 6	
Indirect contribution to objectives:	2	
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 7	
Alignment with other marine and land-use plans		
National Marine Plan 2015	Policy Rec & Tourism 5	
National Planning Framework 4	Policy 14	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	Policy 12A	

# Section 3: Sector Policies

#### Introduction

- 3.1 Sector policies are relevant to the determination of authorisation or enforcement decisions for a particular type of development or activity, for example fish farming or renewable energy generation. The sector policies provide a policy framework to assist public authorities, including regulators, decision makers and planners, to make decisions on sustainable development and activities that take place within, or that affect, the Orkney Islands marine region. Having a suite of sector policies helps ensure that the Plan contributes to government priorities and local sustainable development objectives.
- 3.2 As stated in General Policy 1, there is a presumption in favour of sustainable development, activities and use of the marine environment, when it is consistent with the policies and objectives of this Plan. This approach aligns with Scotland's National Marine Plan. It should also help to attain sustainable economic growth by providing greater certainty to businesses and investors utilising marine resources in the Orkney Islands marine region.
- 3.3 The sector policies identify, by economic sector, the relevant environmental, social and economic factors that need to be considered by decision makers and applicants. Development and/or activity proposals should give consideration to their potential impacts on existing marine users, developments and activities. Where relevant, the sector policies identify how such potential impacts should be addressed e.g. Sector Policy 1: Commercial fishing identifies the requirements for assessing impacts from other development and/or activity types on commercial fishing opportunities. Some development types, for example an offshore windfarm, will have to consider several sector policies: the renewable energy, cables, harbours and commercial fisheries policies, for example. Therefore, proposals for development and/or activities should have regard to all the relevant sector policies.
- 3.4 The sector policies should be applied proportionately by public authority decision makers. Decision makers need to consider whether the type, location, scale and potential impacts of a development or activity justify the application of a specific sector policy or provision within a policy.
- 3.5 General policies are contained in Section 2 of the Plan.

# **Policy structure**

3.6 Each policy has an introductory section detailing the intent and context for the policy, including key information about the economic sector that is particularly relevant to Orkney. The policy is then presented in a clearly defined policy box. The associated text for each policy includes supporting information that should be taken into account in relevant decision making.

- 3.7 Each policy is supported by an information box that outlines:
  - the contribution of the policy to the Plan objectives;
  - relevant information in the Orkney Islands Marine Region: State of the Environment Assessment; and
  - the policy's alignment with other key marine and land-use plans.
- 3.8 Where appropriate, the Plan policies are supported by spatial information in map form or reference to other relevant spatial information (see Section 1 for details).
- 3.9 Appendix 1, which is not exhaustive, summarises the role of relevant public authority consenting and advisory bodies and identifies the key authorisation and enforcement decisions that will implement the Plan policies.
- 3.10 A summary of the wider relevant legislation, policies and guidance that should be considered alongside this Plan is provided in Appendix 2, which is not exhaustive.

# Impacts or effects from development and activities

- 3.11 The Plan policies aim to maximise positive impacts or effects from development and activities and appropriately manage adverse impacts or effects. The impacts or effects of marine development and activities are not limited to the site boundaries of a proposal; for example, sediment plumes arising from dredging activity can be transported long distances before being deposited. Impacts or effects can be temporary, permanent, direct, indirect, short term, medium term, long term and/or cumulative.
- 3.12 It is important to consider the cumulative impact of development and/or activities on the marine environment. Proposals for development and/or activities should consider cumulative impacts associated with relevant existing and proposed development and/or activities, not just those of the same type or sector. Where required, cumulative impacts or effects should be assessed in accordance with the requirements of the appropriate Environmental Impact Assessment (EIA) regulations.
- 3.13 The determination of what is a significant impact or effect should be made by the appropriate public authority decision maker. This judgement should be informed by relevant information and data, assessment, and the views of statutory consultees and wider stakeholders.
- 3.14 Impact or effect significance can be appraised by considering factors including the nature, size and location of the proposal, the potential pathways to impact, potential for cumulative impacts or effects, the significance and sensitivity of affected receptors (e.g. an environmental feature or infrastructure asset), and the magnitude of the impact or effect.



- 3.15 An overarching aim of the Plan's general and sector policies is to, in order of preference, avoid, minimise and/or appropriately mitigate any significant adverse impacts or effects that could be caused by proposed development and/or activities. This should be achieved by implementing the mitigation hierarchy (see Appendix 7a). The most effective mitigation measures are those which avoid or prevent the creation of adverse impacts or effects at source, and such measures should be identified during the project design stage. The aim of this approach is to prevent or avoid the adverse impacts or effects, if possible, and only then consider other mitigation measures. Where specific mitigation measures are required, these can be secured as part of the relevant consent and/or permission.
- 3.16 In addition to supporting appropriate mitigation measures, the Plan policies aim to support the delivery of environmental, social and economic benefits, enhancement and positive effects for biodiversity.



# **Sector Policy 1: Commercial fishing**

### **Policy Intent**

To support and enable a thriving and sustainable commercial fishing sector.

#### Context

- 3.17Commercial fisheries make a significant contribution to the economy of Orkney and are an important source of income, particularly in the more remote and fragile island communities<sup>78</sup>. In the Orkney Islands marine region, commercial fishing is predominately undertaken by inshore creel boats under 10 metres, fishing mainly brown crab. Dive boats, dredgers and jiggers also form part of the inshore fishing fleet<sup>79</sup>. Lobster, velvet and green crab, scallop, whelk and periwinkle are also important commercial shellfish species.
- 3.18The seas around Orkney support significant populations of commercially important species of finfish, with fishing targeting both demersal and pelagic stocks in the waters adjacent to Orkney. These fisheries rely on a healthy marine environment for productive nursery and spawning grounds. There are vessel monitoring system fishing intensity spatial data on National Marine Plan interactive, which show the key areas used by vessels over 12 metres.
- 3.19Regional Inshore Fisheries Groups (RIFGs) aim to improve the management of inshore fisheries in the 0–12 nautical mile zone and to give commercial inshore fishermen a strong voice in wider marine management. The Orkney Regional Inshore Fisheries Group (ORIFG) undertakes this role in Orkney. The Scottish Government, through its Marine Directorate, is responsible for fisheries management within the Orkney Islands marine region. The Orkney Inshore Fisheries Management Plan<sup>80</sup> sets out the objectives and measures for inshore fisheries management in Orkney. The National Marine Plan states that RIFGs should work with all local stakeholders, including Marine Planning Partnerships, to agree joint fisheries management measures.
- 3.20 RIFGs have no powers to implement statutory fisheries management measures, though they are encouraged to implement voluntary measures that stem from their management plans. However, some measures require implementation by the Scottish Government through legislation. Scottish Ministers consider RIFG legislative proposals for statutory implementation. These proposals are required to align with national high-level objectives.

Inshore Fisheries Management Plan. Orkney Sustainable Fisheries Ltd. 2017. <a href="https://rifg.scot/storage/region/Orkney-Sustainable-Fisheries-Ltd.-Management-Plan-2017-2.pdf">https://rifg.scot/storage/region/Orkney-Sustainable-Fisheries-Ltd.-Management-Plan-2017-2.pdf</a>



The Orkney Islands Marine Region: State of the Environment Assessment. 2020
<a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen-v2.pdf">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen-v2.pdf</a>

<sup>79</sup> Ibid.

- 3.21 The Orkney Fisheries Association (OFA) represents local members from inshore fishing vessels in the whitefish, nephrops, scallop and creel sectors, as well as processors and wholesalers.
- 3.22 Fishing has widespread impacts on the marine environment, affecting marine productivity and biodiversity. However, the degree of impact depends on the amount of fishing taking place, the efficiency and selectivity of gear, the approach taken to targeting species, and the nature and sensitivity of species and habitats affected. The degree of impact is also related to natural ecosystem dynamics. Commercial fisheries exert pressures on target and non-target fish populations, both directly through fishery removals, and indirectly by removing predators, prey, competitors and essential habitats<sup>81</sup>.
- 3.23 Inshore commercial fishing in Orkney is predominately carried out from small locally owned vessels providing direct income for remote and economically fragile island communities. When assessing proposals for development and/or activities, regard should be given to the potential socio-economic impacts on the livelihoods of fishermen and associated fragile island communities (e.g. potential adverse effects on local services and exacerbating risks of depopulation).
- 3.24 Given its widespread nature, commercial fishing has the potential to interact significantly with a number of other economic sectors. Fishing activity in Orkney is year-round but follows seasonal trends, and given the dynamic and mobile nature of many fisheries, it is often very difficult to accurately predict precisely where activity will take place from year to year. Fishers will let grounds rest and rely on unfished nursery areas for a healthy fishery.
- 3.25 Proposers of any marine development or activity should consult at an early stage with the ORIFG, OFA and affected fishers in the site-selection, design and planning process for their proposals. This early engagement can help to avoid, minimise and/or mitigate significant adverse impacts on commercial fishing opportunities, and impacts on nursery, spawning and feeding areas for commercially fished species.

The Orkney Islands Marine Region: State of the Environment Assessment. 2020
<a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen-v2.pdf">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen-v2.pdf</a>



# **Sector Policy 1: Commercial fishing**

- i. Proposals for development and/or activities should avoid, minimise and/or appropriately mitigate, significant adverse impacts:
  - a. on commercial fishing opportunities, taking into account seasonality and the year-round operation of the affected fishery;
  - b. on nursery, spawning and feeding areas for commercially fished species, and associated habitats and species;
  - c. due to displacement, including related impacts on the wider marine environment, on fish stocks and the use of fuel by fishing vessels;
  - d. on safe access to marine space for fishing vessels, including the seabed, water column and sea surface, and navigational access to and from landfall areas, e.g. ports, harbours or slipways; and
  - e. on the economic, and where appropriate, cultural importance of fishing, in particular to fragile island communities.
- ii. Orkney Regional Inshore Fisheries Group, Orkney Fisheries Association and/or fishers that use an area that could be affected by a proposed development and/or activity should be consulted at an early stage in the site-selection, design and planning process.



Table 18: Sector Policy 1 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	9	
Indirect contribution to objectives:	5	
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 6.2	
Alignment with other marine and land-use plans		
National Marine Plan 2015	Chapter 6	
National Planning Framework 4	N/A	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Sustainable Communities	
	Strategic Priority: Thriving Economy	
	Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	N/A	

## **Sector Policy 2: Aquaculture**

#### **Policy Intent**

To support and enable a thriving and sustainable aquaculture sector.

#### Context

## Finfish and shellfish farming

- 3.26 Salmon farming has been established in Orkney for many years, providing significant employment and wider socio-economic benefits to island communities. Fish farming jobs and the economic value added to local supply chains support the sustainability of island communities, particularly in more remote and economically fragile locations.
- 3.27 Finfish farming development and/or activities can have significant impacts on the marine environment; associated environmental pressures are identified in the Orkney Marine Region: State of the Environment Assessment<sup>82</sup>. It is therefore important that these potential impacts and risks be carefully managed to safeguard the marine environment in Orkney.
- 3.28 Marine fish farming, out to 12 nautical miles, requires planning permission under the Town and Country Planning (Scotland) Act 1997 'the 1997 Act'. Fish farming is defined in the 1997 Act, for purposes of development, as 'the breeding, rearing or keeping of fish or shellfish (which includes any kind of sea urchin crustacean or mollusc)'. Marine fish farms also require a marine licence (for equipment and moorings), a Controlled Activities Regulations (CAR) licence from SEPA, and a seabed lease from Crown Estate Scotland (CES).
- 3.29 There has been significant expansion of salmon farming development and activities in Orkney over recent decades, including new fish farms and increases in equipment size and production, and/or biomass, at existing fish farm sites (see Maps 12–13). This has increased the cumulative impacts on the marine environment and other marine users from these developments and activities. It is therefore important that the location, scale, siting and design of fish farm development and activities be appropriately managed to safeguard the marine environment and the interests of other marine users, with due consideration to cumulative impacts.

The Orkney Islands Marine Region: State of the Environment Assessment. 2020
<a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen</a> v2.pdf



- 3.30 Orkney Islands Marine Region: Finfish Farming Spatial Guidance should inform decision making on proposals for finfish farming development and activities in Orkney. The guidance identifies the significance of environmental, historic, social, economic and infrastructure features, and the sensitivity of these features, or receptors, to finfish farming development and activities. The Orkney Islands Marine Region: Finfish Farming Spatial Guidance Consultation Draft will be deposited for public consultation alongside this Consultation Draft Plan in 2024.
- 3.31 There are marine shellfish farming sites for Pacific oyster (*Crassostrea gigas*) cultivation in the Orkney Islands marine region.
- 3.32 During the lifetime of this Plan, Orkney Islands Marine Region: Shellfish Farming Spatial Guidance may be adopted to help guide the sustainable development of the sector in Orkney.
- 3.33 Scapa Flow Aquaculture Water Quality Impact Modelling Assessment –
  Development Management Guidance (2018)<sup>83</sup> provides a predictive far-field modelling assessment of current and proposed finfish fish farms in Scapa Flow. The assessment approach provides a better understanding of the water quality impacts of nutrient dispersion arising from existing and planned fish farms, including cumulative impacts.
- 3.34 The salmon farming industry is moving towards larger cages, higher biomass sites, and the siting of fish farms in higher energy locations to benefit from improved waste dispersal and to reduce adverse interactions with other marine users. It is anticipated that current technical innovation in the sector will enable finfish farm development in locations further offshore. These innovations have the potential to reduce future development pressure in more sensitive near-shore locations. There is also potential for the development of multitrophic, semi-closed and closed-containment aquaculture.

### **Seaweed cultivation**

3.35 Seaweed cultivation is not part of the marine fish farming consenting process under the land-use planning system; the construction of a seaweed farm is a marine licensable activity requiring a marine licence. Proposals for a seaweed farm should align with the Marine Directorate Seaweed Cultivation Policy Statement 2017<sup>84</sup>. More detail on the various regulatory requirements and

Seaweed cultivation policy statement. Scottish Government. 2017.
<a href="https://www.gov.scot/publications/seaweed-cultivation-policy-statement-2017/">https://www.gov.scot/publications/seaweed-cultivation-policy-statement-2017/</a>



Scapa Flow Aquaculture Water Quality Impact Modelling Assessment - Development Management Guidance. Intertek and Orkney Islands Council. 2018. <a href="https://www.orkney.gov.uk/Service-Directory/D/aquaculture-water-quality-impact-modelling-assessment.htm">https://www.orkney.gov.uk/Service-Directory/D/aquaculture-water-quality-impact-modelling-assessment.htm</a>

legislation are outlined in information available from the Seaweed Review Steering Group<sup>85</sup>. The Vision for Sustainable Aquaculture describes the Scottish Government's long-term aspirations to 2045 for the finfish, shellfish and seaweed farming sectors, and the wider aquaculture supply chain<sup>86</sup>.

- 3.36 Integrated sites (e.g. shellfish and seaweed) are supported by the Seaweed Cultivation Policy Statement 2017 and will require both planning permission and a marine licence to be obtained independently for each development or activity.
- 3.37 During the lifetime of this Plan, Orkney Islands Marine Region: Seaweed Cultivation Spatial Guidance may be adopted to help guide the sustainable development of the sector in Orkney.



Seaweed Review Steering Group. Scottish Government. https://www.gov.scot/groups/seaweed-review-steering-group/

<sup>&</sup>lt;sup>86</sup> Vision for Sustainable Aquaculture <u>Vision. Scottish Government 2023.</u> https://www.gov.scot/publications/vision-sustainable-aquaculture/

# **Sector Policy 2: Aquaculture**

#### Sector Policy 2a: Finfish and shellfish farming

- i. Proposals for finfish and shellfish farming development and/or activities should have regard to:
  - a. Orkney Local Development Plan;
  - b. National Marine Plan;
  - c. National Planning Framework; and
  - d. any Marine Directorate or SEPA licensing requirements and guidance.
- ii. Proposals for finfish and shellfish farming development and/or activities should avoid, minimise and/or appropriately mitigate significant adverse impacts on:
  - a. landscape and/or seascape character and visual amenity;
  - nature conservation designations, protected species, and the wider biodiversity, including Priority Marine Features;
  - c. seal haul-out sites;
  - d. wild salmonid fish populations due to sea lice and/or escapes (applies to finfish farming only);
  - e. water quality, biological carrying capacity and the benthic environment;
  - f. historic environment assets:
  - g. other coastal and marine users including, but not limited to, commercial fishing, shipping and navigation, port and harbour infrastructure/operations, existing aquaculture sites, marine cable routes and pipelines, tourism, recreation, and sport and leisure activities; and
  - h. amenity, including consideration of road traffic, noise, light, access, vibration, odour and litter impacts.
- iii. Proposals for finfish and shellfish development and/or activities should ensure appropriate measures are included to prevent the introduction and spread of non-native species.
- iv. New finfish farms should not bridge Disease Management Areas, although boundaries may be revised by the Marine Directorate to take account of any changes in fish farm location, subject to the continued management of risk.
- v. Appropriate conditions and, where necessary, a financial bond or a letter of credit will be concluded to ensure that decommissioning and site restoration arrangements will be implemented following ceasing of the operation.
- vi. Proposals for finfish farming development and/or activities should have regard to the Orkney Islands Marine Region: Finfish Farming Spatial Guidance.
- vii. Proposals for shellfish farming development and/or activities should have regard to the Orkney Islands Marine Region: Shellfish Farming Spatial Guidance, where available.

#### **Sector Policy 2b: Seaweed cultivation**

- i. Proposals for seaweed cultivation development and/or activities should demonstrate that:
  - a. regard has been given to the most up-to-date Scottish Government Seaweed Cultivation Policy Statement;
  - b. only seaweed species native to Orkney will be grown;
  - appropriate measures are included to prevent the introduction and spread of non-native species;
  - d. where seaweed is grown for human consumption, cultivators have sited farms at an appropriate distance from sewage outfalls and other potential sources of pollution; and
  - e. there will be no artificial enrichment of the marine environment to aid production.
- ii. Proposals for seaweed cultivation development and/or activities should avoid, minimise and/or appropriately mitigate significant adverse impacts on:
  - a. landscape and/or seascape character and visual amenity;
  - b. nature conservation designations, protected species, and the wider biodiversity, including Priority Marine Features;
  - c. seal haul-out sites;
  - d. water quality and the benthic environment;
  - e. historic environment assets:
  - f. other coastal and marine users including, but not limited to, commercial fishing, shipping and navigation, port and harbour infrastructure/operations, existing aquaculture sites, marine cable routes and pipelines, tourism, recreation, and sport and leisure activities; and
  - g. amenity, including consideration of road traffic, noise, light, access, vibration, odour and litter impacts.
- iii. Proposals for seaweed cultivation development and/or activities should have regard to the Orkney Islands Marine Region: Seaweed Cultivation Spatial Guidance, where available.

Table 19: Sector Policy 2 links to Plan objectives, state of the environment assessment and other plans

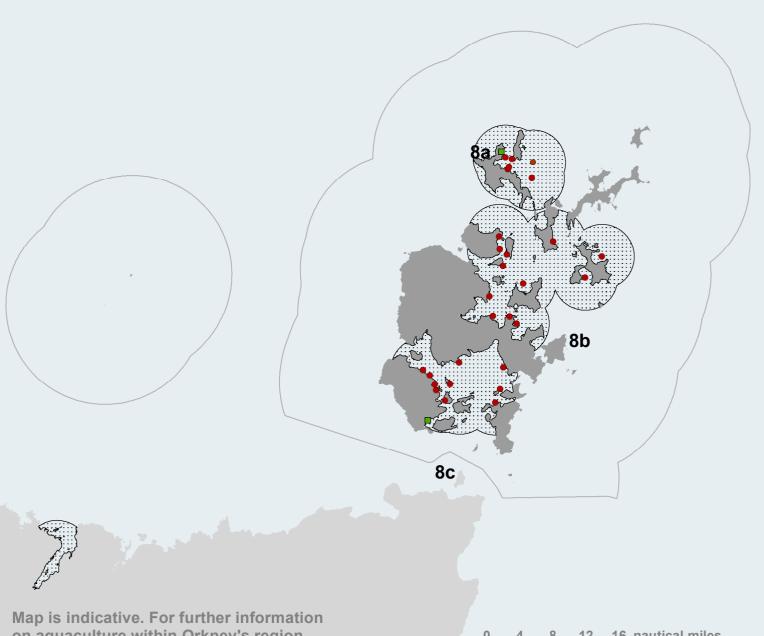
Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	1, 7, 8, 9	
	2	
Indirect contribution to objectives:		
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 6.3	
Alignment with other marine and land-use plans		
National Marine Plan 2015	Section 7	
National Planning Framework 4	Policy 32	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Sustainable Communities Strategic Priority: Thriving Economy Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	Policy 12D, Aquaculture Supplementary Guidance	

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# Map 12: Active aquaculture sites and disease management areas

# Key

- Finfish aquaculture site
- Shellfish aquaculture site
- Disease management areas
- —— 12 nm boundary



Map is indicative. For further information on aquaculture within Orkney's region, developers are advised to refer to www.aquaculture.scotland.gov.uk and NMPi. Disease Management Areas are available on NMPi.

0 4 8 12 16 nautical miles 0 5 10 15 20 kilometres

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Licence Number 100021621. Not to be used for navigation

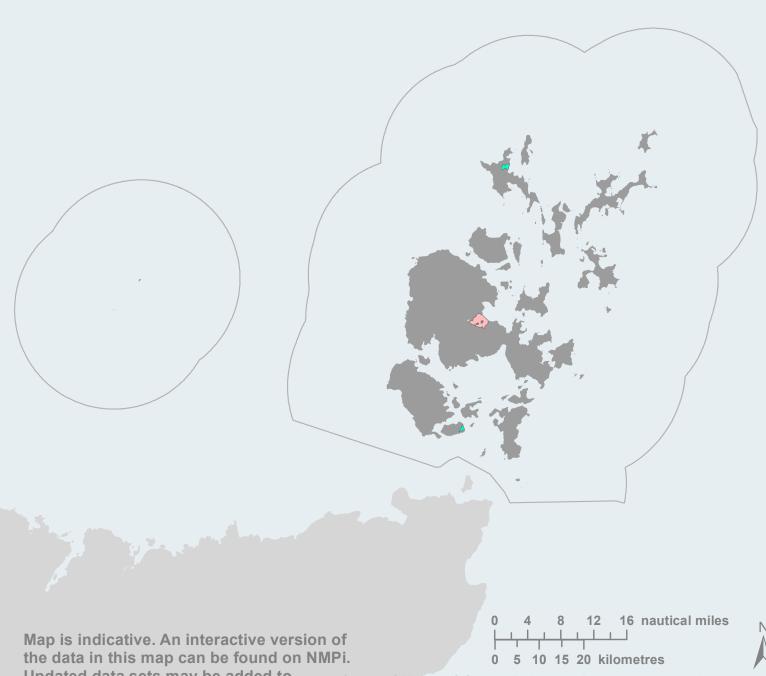
# Map 13: Aquaculture water environment designations

# Key

Carrying capacity - Category 3 areas

Shellfish water protected areas

12 nm boundary



Updated data sets may be added to NMPi when available.

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# Sector Policy 3: Shipping, ports, harbours and ferries

### **Policy Intent**

To support and enable a thriving and sustainable shipping, ports, harbours and ferries sector.

#### Context

- 3.38 Orkney's piers and harbours provide vital infrastructure for local communities and the economy. They support economic sectors and activities including oil and gas, ship-to-ship transfer, cruise tourism, renewable energy, ferry services, marine transportation, commercial fishing, aquaculture and marine recreation.
- 3.39 Port and harbour development and/or activities and shipping can have significant impacts on the marine environment; associated environmental pressures are identified in the Orkney Marine Region: State of the Environment Assessment<sup>87</sup>. It is therefore important that these potential impacts and risks be carefully managed to safeguard the marine environment in Orkney.
- 3.40 The Orkney County Council Act 1974 enables Orkney Islands Council to exercise jurisdiction as a Statutory Harbour Authority and defines the areas in which the authority is empowered. These are Scapa Flow and its approaches, Wide Firth, and Shapinsay Sound, as well as Stromness, Flotta Oil Terminal and Kirkwall. The Orkney Islands Council Order Confirmation Act 1978 and the Orkney Islands Council Harbour Revision Order 1989 extended jurisdiction to include 12 additional piers and harbours in the North Isles.
- 3.41 There are currently 29 piers and harbours under the jurisdiction of Orkney Harbour Authority. Orkney harbours include many components that contribute to national strategic significance, including the vast 324.5 km² sheltered natural harbour of Scapa Flow (see Maps 14–17). Commercial ports, and associated harbour infrastructure, are located at the Hatston Terminal, Kirkwall Harbour, Lyness, Stromness Harbour/Copland's Dock, Scapa Pier, St Margaret's Hope and the Flotta Oil Terminal. St Margaret's Hope is a Trust Port providing harbour facilities for ferry transport, inshore fishing and aquaculture.
- 3.42 Scapa Flow is one of the principal locations in Europe for ship-to-ship (STS) operations for the transfer of crude and fuel oils. There are 15 designated anchor berths in Scapa Flow, including four STS berths.

The Orkney Islands Marine Region: State of the Environment Assessment. 2020
<a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen-v2.pdf">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen-v2.pdf</a>



- 3.43 Orkney's island communities rely on lifeline passenger and freight ferry services between Scrabster and Stromness, and Aberdeen, Kirkwall and Lerwick. A passenger and freight service operates from St Margaret's Hope to Gill's Bay in Caithness. Orkney Ferries operates a fleet of inter-isle ferries connecting the Outer-North, Inner-North and South Isles to Orkney's Mainland. In the summer months, tourist ferries also operate from John O'Groats in Caithness to Burwick in South Ronaldsay, and from Westray to Papa Westray.
- 3.44 The Orkney Harbours Masterplan: Phase 1 (2020)<sup>88</sup> outlines the indicative growth aspirations for ports and harbours operated by the Orkney Harbour Authority and has been adopted by Orkney Islands Council as Planning Policy Advice.
- 3.45 The European Marine Observation and Data Network (EMODnet)<sup>89</sup> is a network of organisations supported by the EU's integrated maritime policy. These organisations work together to observe the sea, process the data according to international standards and make that information freely available as interoperable data layers and data products, such as up-to-date shipping density information.

The European Marine Observation and Data Network (EMODnet)
https://emodnet.ec.europa.eu/en/about emodnet



Orkney Harbours Masterplan Phase 1. Orkney Islands Council Harbour Authority. 2020. https://www.orkneyharbours.com/documents/orkney-harbours-masterplan-phase-1

# **Sector Policy 3: Shipping, ports, harbours and ferries**

# **Sector Policy 3a: Safeguarding navigation, harbour infrastructure and operations**

- i. Proposals for development and/or activities should avoid and/or appropriately mitigate significant adverse impacts on:
  - a. navigational safety;
  - existing, or planned (i.e. routes associated with developments currently within the statutory consenting system), shipping and/or ferry routes\*;
  - c. Harbour Area operations;
  - d. maritime access to and use of pier and harbour infrastructure, including marinas;
  - e. harbours of refuge;
  - f. designated ship-to-ship anchorages;
  - g. anchor berths and other anchorages, as identified on the UK Hydrographic Office Charts, including the associated 1500m sensitive areas for safe vessel manoeuvring; and
  - h. the Flotta Terminal Safeguarded Area
  - \*See What is EMODnet? | European Marine Observation and Data Network (EMODnet) (europa.eu)
- ii. The assessment of potential impacts on factors identified in (i) above should take into account vessel movements and harbour-related operations in all weather and tidal conditions.
- iii. Development and/or activities that would have significant adverse effects on factors identified in (i) above, but which cannot be avoided or appropriately mitigated, should not be permitted.
- iv. Proposals for development and/or activities should avoid, or appropriately mitigate, significant adverse impacts on the efficient use of shipping and/or ferry routes, including consideration of impacts on fuel costs, emissions, journey duration and frequency.
- v. Proposals for development and/or activities should avoid, or appropriately mitigate, significant adverse impacts due to displacement of shipping and/or ferry traffic on other marine users and/or the environment.

## Sector Policy 3b: Commercial ports and national developments

Marine development and/or activities should not be permitted where they would restrict access to, or future expansion of, commercial ports or existing or proposed ports and harbours that are identified as national developments in National Planning Framework.

### Sector Policy 3c: Scapa Flow north and east safeguarded area

The north and east coast of Scapa Flow, from Stromness to St Mary's, within an area 1,500m from the shore, is a strategically important area for potential future harbour development and/or activities in the longer term. The Orkney Harbour Authority should be consulted on proposed development and/or activities within this area to enable compatibility with current and future harbour development, activities and/or operations.

#### Sector Policy 3d: Port and harbour development and/or activities

- i. Proposals for port and harbour development and/or activities should avoid, minimise and/or appropriately mitigate significant adverse impacts on:
  - a. landscape and/or seascape character and visual amenity;
  - nature conservation designations, protected species, and the wider biodiversity, including Priority Marine Features;
  - c. seal haul-out sites;
  - d. water quality and the benthic environment;
  - e. historic environment assets;
  - coastal processes including those caused by erosion, flooding and wider coastal change;
  - g. other coastal and marine users including, but not limited to, commercial fishing, shipping and navigation, port and harbour infrastructure/operations, aquaculture sites, tourism, recreation, and sport and leisure activities; and
  - h. amenity, including consideration of road traffic, noise, light, access, vibration, odour and litter impacts.
- ii. Any dredged material associated with port, harbour or shipping development and/or activities should, where appropriate, be reused for coastal protection, landscape, recreation, and/or ecological enhancement, or where this is not appropriate, such dredge material should be deposited in an appropriate dredge spoil deposit site(s).
- iii. Climate change related risks and impacts, including those associated with sea level rise projections, should be taken into account in the design of port and harbour development and/or activities, to ensure that they remain viable and resilient to a changing climate over their lifetime.

Table 20: Sector Policy 3 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	1, 8, 9	
Indirect contribution to objectives:	6	
Assessment of the condition of the Orkney Islands marine region		
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 6.4	
Alignment with other marine and land-use plans		
National Marine Plan 2015	Chapter 13	
National Planning Framework 4	N/A	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Sustainable Communities Strategic Priority: Thriving Economy Strategic Priority: An Outstanding Environment and Quality of Life	
Orkney Local Development Plan 2017	Policies 7b ii & 12E	

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# Map 14: Harbour areas, harbour infrastructure and ferry routes

# Key

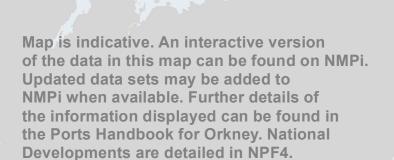
- Orkney Harbour Authority pier and harbour infrastructure
- St Margaret's Hope pier and harbour infrastructure
- Geo Slipway, Deerness
- National developments
- Commercial ports
- Marinas

Indicative ferry routes

St Margaret's Hope pier jurisdiction

Orkney Harbour Authority areas

12 nm boundary



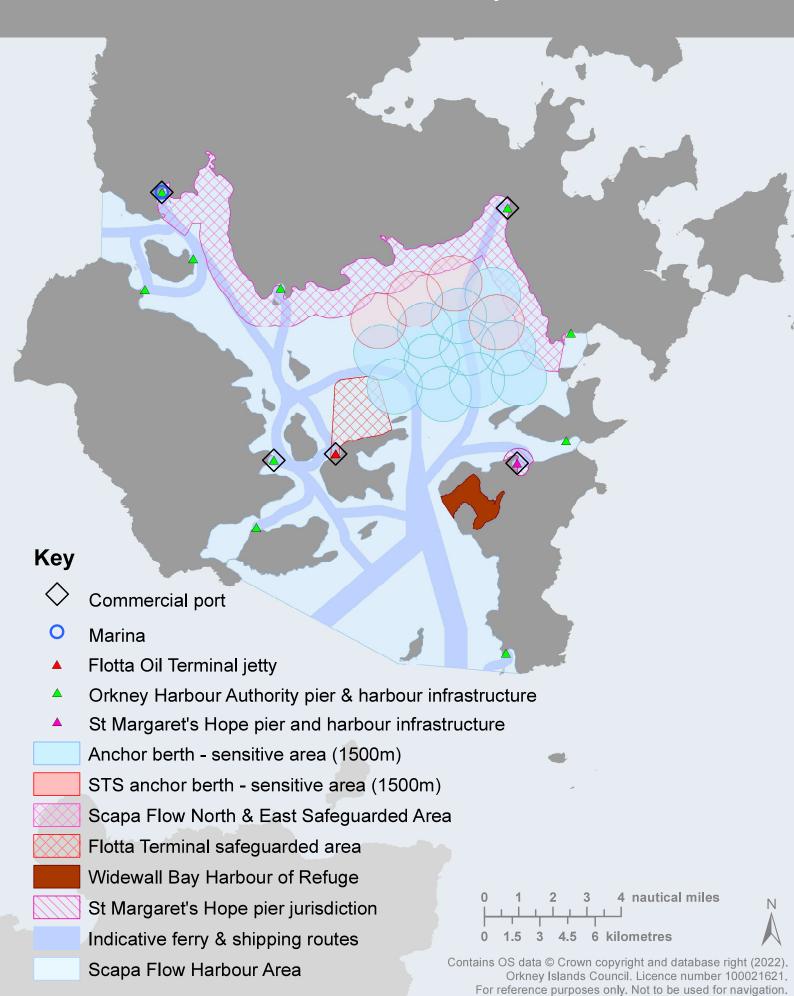


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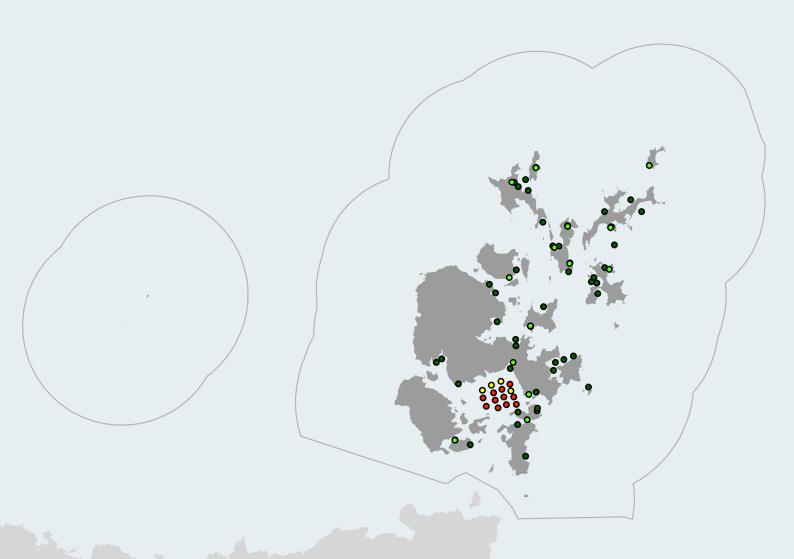
# Map 15: Scapa Flow harbour infrastructure and operations



# Map 16: Anchorages

# Key

- Visiting Yacht Moorings\*
- Designated anchor berth (Scapa Flow)
- Designated STS anchor berth (Scapa Flow)
- Other anchorages
  - 12 nm boundary



Map is indicative. An interactive version of the data in this map can be found on NMPi. Updated data sets may be added to NMPi when available.

\*Visiting Yacht Moorings are seasonal and removed during the winter months. For information on Clyde Cruising Club Anchorages please refer to Map 21.



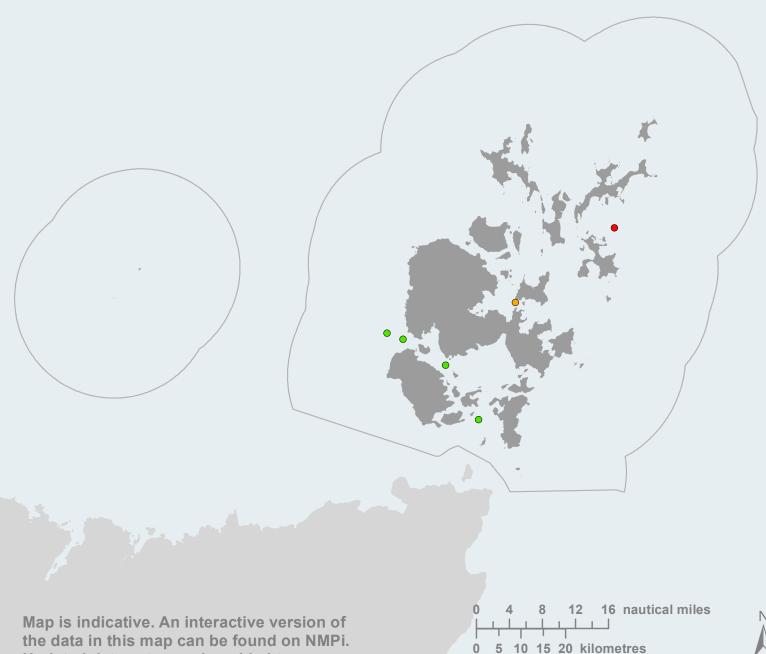
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# Map 17: Dredge spoil deposit sites

# Key

# **Dredge Spoil Deposit Sites**

- Closed
- Disused
- Open
- 12 nm boundary



Updated data sets may be added to NMPi when available.





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# Sector Policy 4: Pipeline, electricity and telecommunications infrastructure

### **Policy Intent**

To support and enable sustainable pipeline, electricity and telecommunications infrastructure, and safeguard this critical infrastructure to ensure a safe and reliable network.

#### Context

- 3.46 Pipelines and electricity and telecommunications cables provide critical infrastructure to support the economic and social wellbeing of Orkney, Scotland and the UK. Within the Orkney Islands marine region, this infrastructure is vital for electricity transmission and distribution. telecommunications, the supply of potable water and removal of wastewater, and the transportation of hydrocarbons.
- 3.47 Electricity transmission is the transportation of electricity from generating plants to where it is required at centers of demand. The electricity transmission network, or grid, transports electricity at high voltages through overhead lines, underground cables and subsea cables. The transmission network connects large-scale generation, primarily renewables, to central and southern Scotland and the rest of the UK. A 220kV electricity transmission cable between Dounreay in Caithness and Warebeth in Orkney was given consent in 2019.
- The electricity distribution network is connected into the transmission network. 3.48 The voltage is lowered by transformers at electricity substations, and the power is then distributed to homes and businesses through overhead lines. underground cables and subsea cables.
- 3.49 Distribution cables typically carry voltages below 33kV whereas transmission cables typically carry 132kV and above. Distribution and transmission electricity cables can have different design, installation and protection requirements, which vary with location and substrate type.
- Cable and pipeline development and/or activities can have significant impacts on the marine environment; associated environmental pressures are identified in the Orkney Marine Region: State of the Environment Assessment<sup>90</sup>. It is therefore important that these potential impacts and risks be carefully managed to safeguard the marine environment in Orkney.
- 3.51 Electricity and telecommunications cables need to be safeguarded from adverse interactions with other marine users (see Map 18). The operation,

<sup>&</sup>lt;sup>90</sup> The Orkney Islands Marine Region: State of the Environment Assessment. 2020 https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9screen v2.pdf



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maintenance and development of the electricity network in Orkney should achieve security of supply, contribution to net-zero commitments, and the highest possible quality and safety standards. Cable owners aim to minimise risks to all marine users and the marine environment. Submarine cables need to be appropriately protected whilst achieving successful seabed user coexistence.

- 3.52 The UN Convention on the Law of the Sea 1982 enhanced the international regulation to include all submarine cables. The Submarine Telegraph Act 1885 (the 1885 Act) applies to cables in UK waters and was most recently updated by the Merchant Shipping Act 1995. The 1885 Act aims to protect cables by, amongst other things, making it an offence to damage a cable, and restricting vessels and fishing activities within certain distances of cables.
- 3.53 As well as undertaking appropriate protection measures for their cables and for other marine users, cable owners provide information via cable awareness projects such as KIS-ORCA<sup>91</sup>. Cable information is given freely to fishermen and other seabed users so that they can avoid potential snagging of cables. After being laid, cable routes should be notified by cable owners to the UK Hydrographic Office (UKHO), who will issue a notice to mariners to insert the cable onto the relevant charts<sup>92</sup>.
- 3.54 Crude oil is imported to the Flotta Oil Terminal via a 30-inch subsea pipeline from several offshore installations in the Flotta Catchment Area.
- 3.55 There are island communities in Orkney that have potable water supplied via subsea pipeline. Wastewater treatment facilities discharge wastewater via outfall pipes into the marine environment in Orkney. These infrastructures need to be safeguarded from adverse interactions with other marine users (see Map 18).
- 3.56 The European Marine Energy Centre provides facilities in Orkney for testing wave and tidal renewable energy devices that include 11kV cables running from an onshore substation to open-sea testing berths.
- 3.57 There are significant offshore wind, wave and tidal energy resources within the Orkney Islands marine region and potential for future commercial-scale renewable energy projects. The Sectoral Marine Plan for Offshore Wind Energy identifies Plan Option areas within and adjacent to the Orkney Islands marine region for commercial-scale offshore wind development. The agreements for lease within these Plan Options areas have been issued by

<sup>&</sup>lt;sup>92</sup> MGN 661 (M+F) Navigation - safe and responsible anchoring and fishing practices. https://www.gov.uk/government/publications/mgn-661-mf-navigation-safe-and-responsible-anchoring-and-fishing-practices/mgn-661-mf-navigation-safe-and-responsible-anchoring-and-fishing-practices



<sup>91</sup> KIS-ORCA Offshore Renewable and Cable Awareness. https://kis-orca.org/

Crown Estate Scotland via the Scotwind leasing round<sup>93</sup>. Such projects are likely to require grid connections, electricity and communications cables linking devices to shore.

- 3.58 There is potential for commercial-scale renewable energy projects to connect to shore via privately owned subsea cables for the purposes of producing zero-carbon fuels in Orkney. Existing oil and gas infrastructure has the potential to be repurposed to support the zero-carbon fuel sector (see Sector Policy 6). The key consenting requirements are outlined in Appendix 1, which is not exhaustive.
- 3.59 Electricity and telecommunications cables, and pipelines, in the Orkney Islands marine region are identified in Map 18.

## **Sector Policy 4: Pipeline, electricity and telecommunications infrastructure**

Sector Policy 4a: Pipeline, electricity and telecommunications infrastructure development and/or activities

- i. Proposals for pipeline, electricity and/or telecommunications development and/or activities including the laying, replacement, maintenance and decommissioning of pipelines, electricity and/or telecommunication cables, and/or the development of associated onshore and/or marine infrastructure, should have regard to:
  - a. Orkney Local Development Plan;
  - b. National Marine Plan; and
  - c. National Planning Framework;

The National Marine Plan includes policies on the factors that should be taken into account by electricity and telecommunications network and cable owners, and public authority decision makers, when reaching decisions on development and/or activities including, the laying, replacement, maintenance and decommissioning of submarine cables.

ii. Network and cable owners should engage with public authority decision makers, appropriate statutory bodies, marine users and local communities at an early stage to avoid, minimise and/or appropriately mitigate impacts on the historic and natural environment, existing development and/or infrastructure assets, and other marine users.

<sup>93</sup> Scotwind. Crown Estate Scotland. https://www.crownestatescotland.com/our-projects/scotwind



- iii. Proposals for new or replacement pipeline or cable development and/or activities should avoid, minimise and/or appropriately mitigate significant adverse impacts on:
  - a. landscape and/or seascape character and visual amenity;
  - nature conservation designations, protected species, and the wider biodiversity, including Priority Marine Features;
  - c. seal haul-out sites;
  - d. water quality and the benthic environment;
  - e. historic environment assets;
  - f. coastal processes, including those caused by erosion, flooding and wider coastal change;
  - g. other coastal and marine users including, but not limited to, commercial fishing, shipping and navigation, ports and harbour infrastructure/operations, aquaculture sites, tourism, recreation, sport and leisure activities; and
  - h. amenity, including consideration of road traffic, noise, access, vibration, odour and litter impacts.

## Sector Policy 4b: Safeguarding existing pipeline, electricity and telecommunications cable infrastructure

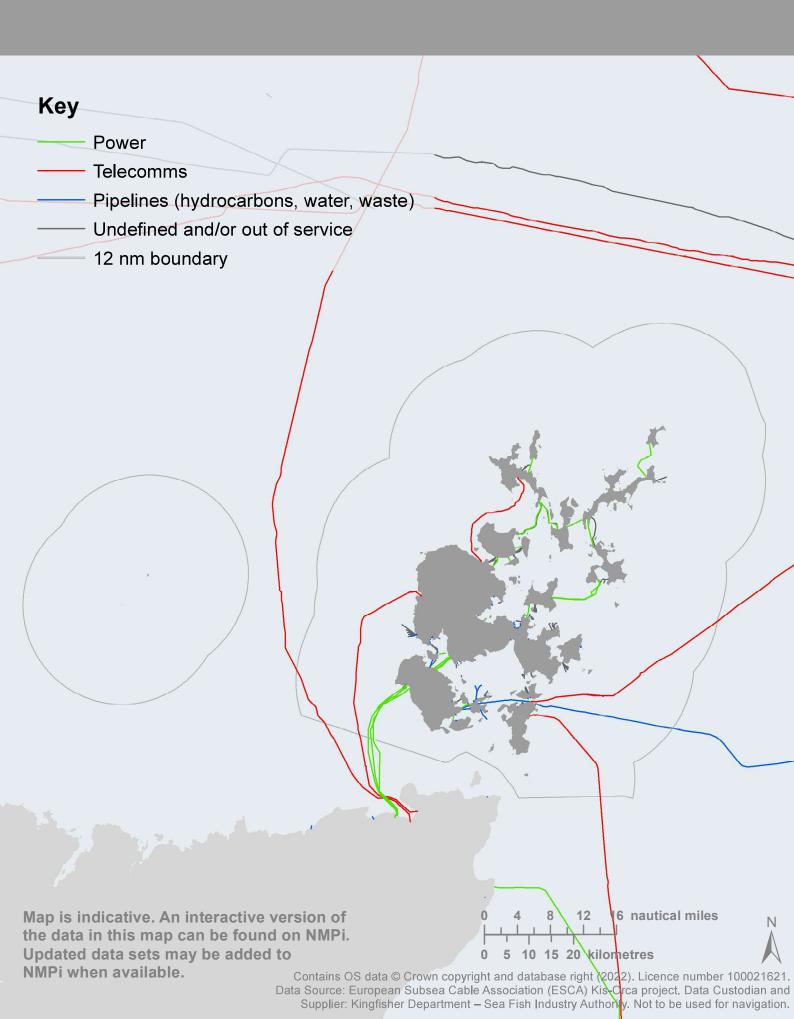
i. Proposals for development and/or activities should avoid, minimise and/or appropriately mitigate adverse impacts on pipeline, electricity and telecommunications infrastructure.



Table 21: Sector Policy 4 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plar	objectives
Direct contribution to objectives:	1, 8
Indirect contribution to objectives:	2, 3
Assessment of the condition of the C	Orkney Islands marine region
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 6.6
Alignment with other marine and land-use plans	
National Marine Plan 2015	Chapter 14
National Planning Framework 4	Policy 11
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Sustainable Communities Strategic Priority: Thriving Economy Strategic Priority: An Outstanding Environment and Quality of Life
Orkney Local Development Plan 2017	N/A

# Map 18: Cables and pipelines



# Sector Policy 5: Offshore wind, wave and tidal renewable energy generation

### **Policy Intent**

To support and enable thriving and sustainable offshore wind, wave and tidal renewable energy generation.

#### Context

- 3.60 Orkney waters are amongst the most energy-rich localities in Europe, with significant wind, wave and tidal renewable energy resources. Renewable energy developments can create significant economic opportunities for Orkney and Scotland, promoting inclusive growth and a just transition to net zero via the development of skills and supply chain bolstering (see Map 19).
- 3.61 This Plan aims to contribute to the achievement of Scottish and UK energy and climate change policy objectives and targets, and minimise the potential adverse effects on the environment and other marine users from offshore wind, wave and tidal energy development and activities in Orkney waters.
- 3.62 Renewable energy generation development and activities can have significant impacts on the marine environment; associated environmental pressures are identified in the Orkney Marine Region: State of the Environment Assessment<sup>94</sup>. It is therefore important that these potential impacts and risks be carefully managed to safeguard the quality and productivity of the marine environment in Orkney.
- 3.63 The Scottish Government has prepared guidance on the Decommissioning of Offshore Renewable Energy Installations in Scottish waters or in the Scottish part of the Renewable Energy Zone under The Energy Act 2004<sup>95</sup>.

waters/documents/decommissioning-offshore-renewable-energy-installations-scottish-waters-scottish-part-renewable-energy-zone-under-energy-act-2004-guidance-notes-industry-scotland/decommissioning-offshore-renewable-energy-installations-scottish-waters-scottish-part-renewable-energy-zone-under-energy-act-2004-guidance-notes-industry-scotland/govscot%3Adocument/decommissioning-offshore-renewable-energy-



The Orkney Islands Marine Region: State of the Environment Assessment. 2020 <a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen</a> v2.pdf

<sup>&</sup>lt;sup>95</sup> Decommissioning of Offshore Renewable Energy Installations in Scottish waters or in the Scottish part of the Renewable Energy Zone under The Energy Act 2004. https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2022/08/offshore-renewable-energy-decommissioning-guidance-scottish-

- 3.64 The Orkney Renewable Energy Forum<sup>96</sup> represents the diverse supply chain businesses supporting the renewables sector in Orkney.
- 3.65 Sector Policy 6 addresses development and activities for hydrogen and other low and zero carbon fuels.

### **Context: Wind energy**

- 3.66 Offshore wind energy will play a pivotal role in Scotland's energy system over the coming decades to help tackle the Climate Emergency<sup>97</sup>. The Scottish Government has set a net-zero greenhouse gas emissions target for 2045, with interim targets for greenhouse gas emissions reduction of 75% by 2030 and 90% by 2040, against 1990 baseline levels. These targets are a major driver for offshore wind and wider renewable energy development and decarbonisation.
- 3.67 The Sectoral Plan for Offshore Wind Energy<sup>98</sup> sets out the strategic vision and objectives for future commercial-scale offshore wind development in Scotland. This Plan has identified two Plan Option areas for future commercial-scale offshore wind development, North 1 (N1) and North East 2 (NE2), within the Orkney Islands marine region, along with a wider suite of Plan Option areas across the North of Scotland. The agreements for lease within these Plan Options areas have been issued by Crown Estate Scotland via the Scotwind leasing round<sup>99</sup>. The National Marine Plan contains policies for commercial scale offshore wind development and activities.
- 3.68 At the time of writing, the draft Plan Option areas for wave and tidal energy development have been identified in the Sectoral Marine Plans for Offshore Wind, Wave and Tidal Energy in Scottish Waters: Consultation Draft<sup>100</sup>. The National Marine Plan contains policies for wave and tidal energy development and activities.

 $\underline{installations\text{-}scottish\text{-}waters\text{-}scottish\text{-}part\text{-}renewable\text{-}energy\text{-}zone\text{-}under\text{-}energy\text{-}act\text{-}2004\text{-}guidance\text{-}notes\text{-}industry\text{-}scotland\text{.}pdf}$ 

 $<sup>\</sup>frac{https://www.gov.scot/publications/draft-sectoral-marine-plans-offshore-renewable-energy-scottish-waters-consultation/documents/$ 



<sup>&</sup>lt;sup>96</sup> Orkney Renewable Energy Forum. <a href="https://www.oref.co.uk/">https://www.oref.co.uk/</a>

The Global Climate Emergency - Scotland's Response: Climate Change Secretary Roseanna Cunningham's statement. 2019.

 $<sup>\</sup>frac{https://www.gov.scot/publications/global-climate-emergency-scotlands-response-climate-change-secretary-roseanna-cunninghams-statement/$ 

Sectoral marine plan for offshore wind energy. Scottish Government. 2020. <a href="https://www.gov.scot/publications/sectoral-marine-plan-offshore-wind-energy/?msclkid=66ae4153a5fe11ec919ac55a0fe68143">https://www.gov.scot/publications/sectoral-marine-plan-offshore-wind-energy/?msclkid=66ae4153a5fe11ec919ac55a0fe68143</a>

<sup>99</sup> Scotwind. Crown Estate Scotland. https://www.crownestatescotland.com/our-projects/scotwind

Draft Sectoral Marine Plans for Offshore Renewable Energy in Scottish Waters: Consultation Paper. Scottish Government. 2013.

3.69 National Planning Framework 4 Policy 11 b) states that development proposals for wind farms in National Parks and National Scenic Areas will not be supported. The Hoy and West Mainland National Scenic Area includes significant marine areas, therefore, the relevant national planning policy is reflected in this Plan in Sector Policy 5 a) iii.

### **Context: Wave and tidal energy**

- 3.70 Orkney is a global leader in wave and tidal energy research and development. The European Marine Energy Centre (EMEC) was established in 2003 and provides a unique facility for testing wave and tidal renewable energy devices in Orkney. Wave and tidal energy, or marine renewable energy, can diversify and expand renewable energy generation to make a significant contribution to meeting net-zero targets and increase the current economic benefits to Orkney communities.
- 3.71 EMEC provides test and demonstration sites for wave and tidal energy devices. There are currently five test sites in Orkney:
  - Billia Croo grid-connected wave energy test site, Stromness, Mainland Orkney
  - Fall of Warness grid-connected tidal energy test site, off the island of Eday
  - Caldale Hydrogen Production Plant, on Eday
  - Scapa Flow scale wave test site, off St Mary's Bay
  - Shapinsay Sound scale tidal test site, off Head of Holland
- 3.72 At each of the EMEC grid-connected test sites, there are subsea cables which run from each test berth at sea to a substation onshore, where electricity generated on-site can then be fed into the UK National Grid.



## **Sector Policy 5: Offshore wind, wave and tidal renewable energy generation**

### Sector Policy 5a: Offshore wind energy

- i. When considering proposals for offshore wind energy development and/or activities, public authority decision makers should have regard to:
  - a. net economic impact, including local social and economic benefits such as employment, associated business and supply chain opportunities;
  - the scale of contribution to renewable energy targets and effect on greenhouse gas emissions reduction targets; and
  - c. cumulative impacts, taking into account the cumulative impact of existing and consented development and/or activities;
- ii. Proposals for offshore wind energy development and/or activities should avoid, minimise or appropriately mitigate significant adverse impacts on:
  - a. landscape and/or seascape character and visual amenity;
  - b. nature conservation designations, protected species, and the wider biodiversity, including Priority Marine Features;
  - c. seal haul-out sites;
  - d. water quality and the benthic environment;
  - e. historic environment assets;
  - f. coastal processes including those caused by erosion, flooding and wider coastal change;
  - g. other coastal and marine users including, but not limited to, commercial fishing, shipping and navigation, ports and harbour infrastructure/operations, aquaculture sites, tourism, recreation, and sport and leisure activities;
  - h. aviation and defence interests;
  - i. telecommunications, radar and broadcasting installations; and
  - j. amenity, including consideration of road traffic, noise, light, access, vibration, shadow flicker and litter impacts.
- iii. Proposals for offshore wind farms will not be supported in the Hoy and West Mainland National Scenic Area.

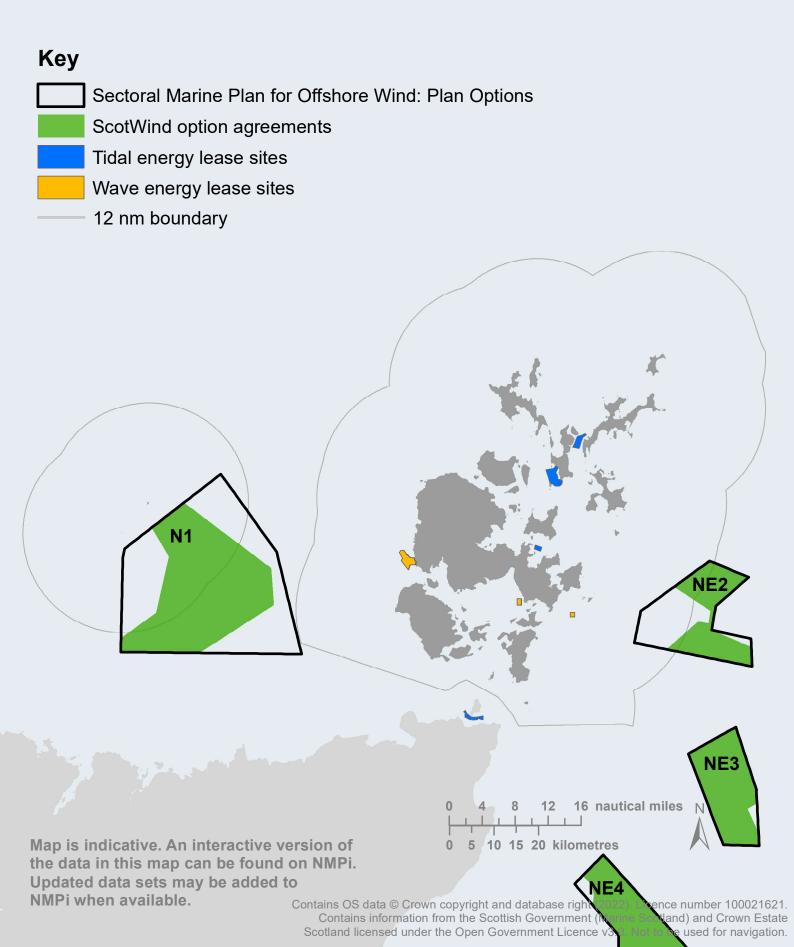
### Sector Policy 5b: Wave and tidal energy

- i. When considering proposals for wave and tidal energy development and/or activities, public authority decision makers should have regard to:
  - a. net economic impact, including local social and economic benefits such as employment, associated business and supply chain opportunities;
  - the scale of contribution to renewable energy targets and effect on greenhouse gas emissions reduction targets; and
  - c. cumulative impacts, taking into account the cumulative impact of existing and consented energy development;
- ii. Proposals for wave and tidal energy development and/or activities should avoid, minimise or appropriately mitigate significant adverse impacts on:
  - a. landscape and/or seascape character and visual amenity;
  - nature conservation designations, protected species, and the wider biodiversity, including Priority Marine Features;
  - c. seal haul-out sites;
  - d. water quality and the benthic environment;
  - e. historic environment assets:
  - f. aviation and/or defence interests;
  - g. coastal processes including those caused by erosion, flooding and wider coastal change;
  - other coastal and marine users including, but not limited to, commercial fishing, shipping and navigation, ports and harbour infrastructure/operations, aquaculture sites, tourism, recreation, and sport and leisure activities; and
  - i. amenity, including consideration of road traffic, noise, light, access, vibration and litter impacts.

Table 22: Sector Policy 5 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	1, 2, 3, 4, 7, 8	
Indirect contribution to objectives:	5	
Assessment of the condition of the Orkney Islands marine region		
State of the Environment Assessment baseline information:	Section 6.5	
Alignment with other marine and land	-use plans	
National Marine Plan 2015	Chapter 11	
National Planning Framework 4	Policy 11	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Sustainable Communities	
	Strategic Priority: Thriving Economy	
	Strategic Priority: Climate Emergency	
	Strategic Priority: An Outstanding Environment and Quality of Life	
	Strategic Priority: Innovation, Research and Development	
Orkney Local Development Plan 2017	Policy 7C, Supplementary Guidance: Energy	

# Map 19: Offshore wind, wave and tidal energy sites



### Sector Policy 6: Zero carbon fuels, and oil and gas transition

### **Policy Intent**

To support and enable a thriving and sustainable zero carbon fuels sector and a just transition for the oil and gas sector.

#### Context

- 3.73 Zero carbon fuels, including green hydrogen and ammonia, are likely to play an important role in the decarbonisation of heating, transport and industrial processes. The abundant wind, wave and tidal renewable energy resources in the North of Scotland can be used to produce zero carbon fuels to supply growing European markets.
- 3.74 The Orkney Hydrogen Strategy<sup>101</sup> aims to develop a sustainable hydrogen economy in Orkney to help meet net-zero targets, create local jobs, and develop a local supply chain and a more resilient local energy system. The strategy seeks to establish Orkney as the global exemplar in green hydrogen integration, supporting a robust rural net-zero economy.
- 3.75 Orkney has been a demonstration region for numerous green hydrogen demonstration projects. These projects, including Surf 'n' Turf and Building Innovative Green Hydrogen in Isolated Territories, have produced hydrogen from renewable sources, including community-owned wind energy and tidal energy installations.
- 3.76 Zero carbon fuel production can provide an energy storage solution when renewable energy generation is curtailed by limited grid capacity. These fuels can help to maximise green energy utilisation, enhance the economic viability of affected renewable energy projects and support island sustainability.
- 3.77 The higher cost of electricity transmission charges for renewable energy projects in the North of Scotland is expected to be a major driver for the production of zero carbon fuels from renewable energy developments in and around Orkney waters. It is anticipated that renewable energy generation projects will export electricity to the grid and consider the option of using generated electricity to produce zero carbon fuels. Offshore renewable energy developments may need to connect to shore via privately owned subsea and/or onshore cables for the purposes of producing zero carbon fuels in Orkney.

Orkney Hydrogen Strategy – The Hydrogen Islands 2019-2025. Orkney Islands Council. <a href="https://www.orkney.gov.uk/Service-Directory/Renewable/h2-in-orkney-the-hydrogen-islands.htm">https://www.orkney.gov.uk/Service-Directory/Renewable/h2-in-orkney-the-hydrogen-islands.htm</a>



120

- 3.78 The Flotta Oil Terminal is a strategically important industrial asset that imports crude oil via a subsea pipeline from several offshore installations in the Flotta Catchment Area. The terminal operators, Repsol Resources UK, and their partners are exploring diversification options to enable a transition to low and zero carbon fuel production and distribution activities. The Flotta Oil Terminal is a Control of Major Accident Hazards site<sup>102</sup>.
- 3.79 Looking ahead, Orkney has extensive harbour, oil and gas infrastructure that has potential to be repurposed to produce and distribute zero carbon fuels. The Flotta Hydrogen Hub is a proposed green hydrogen production and export project on the island of Flotta that is investigating the opportunity for offshore wind energy to power the production of green hydrogen on an industrial scale. This project aims to investigate options for hydrogen production and distribution from Flotta, utilising a repurposed area of the existing Flotta Oil Terminal.
- 3.80 Orkney Harbour Authority aims to play a key role in decarbonisation by enabling a transition from hydrocarbons to zero carbon fuels for shipping and ports. This shift to carbon free fuels will require a stepped transition from Low Sulphur Fuel Oil and Marine Gasoil to Liquid Natural Gas, leading to future hydrogen and/or ammonia carbon free fuelling for shipping. The Island Growth Deal aims to bring forward a proposed Future Fuels Hub in Scapa Flow to support this transition.
- 3.81 Scapa Flow is one of the principal locations in Europe for ship-to-ship operations for the transfer of crude and fuel oils, Liquid Natural Gas and Liquid Petroleum Gas (see Map 20).

<sup>&</sup>lt;sup>102</sup> Control of Major Accident Hazards. Health and Safety Executive. <a href="https://www.hse.gov.uk/comah/">https://www.hse.gov.uk/comah/</a>



### Sector Policy 6: Zero carbon fuels, oil and gas transition

- i. Proposals for development and/or activities for the production and/or distribution of zero carbon fuels, including associated cable and/or pipeline infrastructure, and/or the development of associated onshore and/or marine infrastructure, should have regard to:
  - a. Orkney Local Development Plan;
  - b. National Marine Plan; and
  - c. National Planning Framework.
- ii. Proposals to repurpose existing oil and gas infrastructure for the production and/or distribution of zero carbon fuels should be consistent with the objectives and policies of this Plan, Orkney Local Development Plan, National Marine Plan and National Planning Framework.
- iii. Proposals for pipeline and/or electricity cable development and/or activities for the purpose of producing and/or distributing zero carbon fuels that include the laying, replacement, maintenance and decommissioning of pipelines, electricity and/or telecommunication cables should have regard to Sector Policy 4.



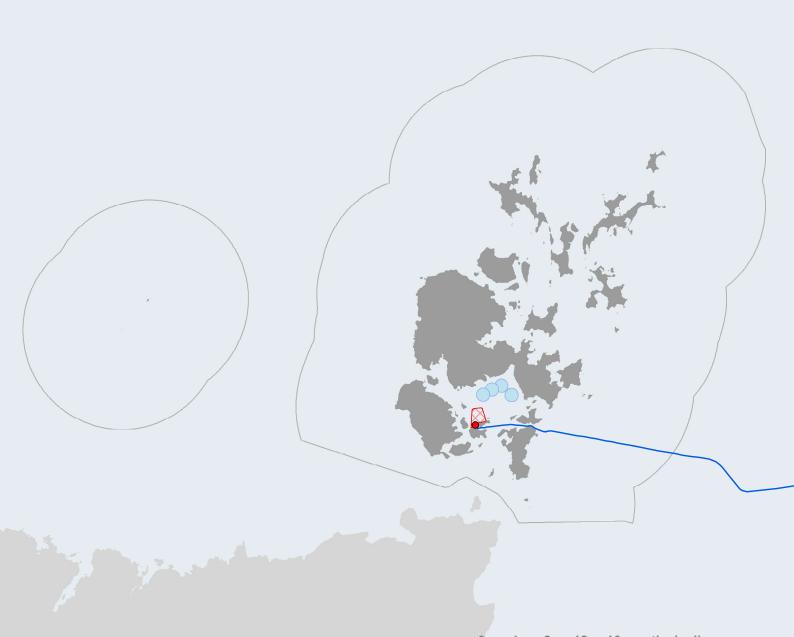
Table 23: Sector Policy 6 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives		
Direct contribution to objectives:	1, 3	
Indirect contribution to objectives:	4	
Assessment of the condition of the C	orkney Islands marine region	
Orkney Islands Marine Region: State of the Environment Assessment baseline information	Section 6.7	
Alignment with other marine and land	d-use plans	
National Marine Plan 2015	Chapter 9	
National Planning Framework 4	Policies 1 and 11	
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Sustainable Communities	
	Strategic Priority: Thriving Economy	
	Strategic Priority: Climate Emergency	
	Strategic Priority: An Outstanding Environment and Quality of Life	
	Strategic Priority: Innovation, Research and Development	
Orkney Local Development Plan 2017	N/A	

## Map 20: Oil and gas infrastructure

### Key

- Flotta Oil Terminal
- Flotta Oil Terminal pipeline
- Flotta safeguarded area
  - Ship-to-ship anchor berth sensitive area (1500m)
- —— 12 nm boundary



Map is indicative. An interactive version of the data in this map can be found on NMPi. Updated data sets may be added to NMPi when available.



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### Sector Policy 7: Tourism, recreation, leisure and sport

### **Policy Intent**

To support and enable a thriving and sustainable tourism, recreation, leisure and sport sector.

#### **Context: Tourism**

- 3.82 The many special qualities of Orkney make it a world-class tourist and leisure destination. There are numerous islands with unique characteristics to explore, and a diverse range of opportunities for marine recreation, sport and leisure.
- 3.83 Tourism is an important economic driver in Orkney, providing a wide range of employment opportunities whilst bringing significant money into the local economy through visitor spending<sup>103</sup>.
- 3.84 Orkney's environmental quality, natural and cultural heritage, and historic environment underpin the success of the tourism sector. It is therefore important to protect these special qualities and assets to ensure the long-term sustainability of tourism and recreation, and the associated benefits enjoyed by local communities. As identified in the Orkney Islands Marine Region: State of the Environment Assessment, tourism infrastructure, development and activities can have significant impacts on the environment<sup>104</sup>. It is therefore important that these impacts be carefully managed to safeguard the quality and productivity of the coastal and marine environment in Orkney.
- 3.85 Sustainable tourism requires investment in infrastructure and can provide an incentive for conservation and environmental enhancement investments that benefit the wider community<sup>105</sup>.

Enabling conditions for an equitable and sustainable blue economy. Cisneros-Montemayor et al. 2021. https://www.nature.com/articles/s41586-021-03327-3#:~:text=%20Enabling%20conditions%20for%20an%20equitable%20and%20sustainable,global%20development%205%2C%20and%20high-level%20policies...%20More%20



Orkney Islands Visitor Survey. Orkney Islands Council and VisitScotland. 2020.
<a href="https://www.visitscotland.org/binaries/content/assets/dot-org/pdf/research-papers/orkney-islands-visitor-survey-2019.pdf">https://www.visitscotland.org/binaries/content/assets/dot-org/pdf/research-papers/orkney-islands-visitor-survey-2019.pdf</a>

The Orkney Islands Marine Region: State of the Environment Assessment. 2020
<a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen-v2.pdf">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen-v2.pdf</a>

### **Context: Recreation, leisure and sport**

- 3.86 Coastal and marine recreation, leisure and sport provide significant wellbeing benefits to local communities and visitors. Popular activities include, for example, paddle sports, recreational boating, surfing, diving, recreational fishing, swimming, coastal walking, birdwatching and competitive sport. This includes both formal and informal activities undertaken by individuals, clubs and commercial ventures.
- 3.87 Orkney's attractive coastal scenery, wildlife, historic assets and beaches are some of the many assets enjoyed by those engaging in marine and coastal recreational, leisure and sport activities. Clean and healthy seas and coast are fundamentally important to the enjoyment of these activities. Spending time in the coastal and marine environment has also been shown to enhance mental wellbeing and physical health, leading to an improved quality of life. 106
- 3.88 Orkney's coastal infrastructure and facilities, including the core path network<sup>107</sup>, anchorages (see Map 21), and the many marine access points, including marinas, piers and slips (see Map 14), are key to enabling a diverse range of recreational uses and are important assets that need to be safeguarded and enhanced.
- 3.89 Sector Policy 7 aims to ensure that tourism, recreation, leisure and sport development, activities and/or use protect and, where appropriate, enhance the environment in which they operate. In addition to this policy, tourism recreation, leisure and sport development and/or activities will be assessed in accordance with other relevant policies in the Plan (e.g. harbour infrastructure developments for tourism will also be assessed under Sector Policy 3). Furthermore, this policy aims to avoid or reduce adverse impacts on tourism, recreation, sport and leisure uses.
- 3.90 Further information on tourism, recreation, leisure and sport in Orkney is provided in the Orkney Islands Marine Region: State of the Environment Assessment<sup>108</sup>. The Orkney Coastal and Marine Recreational Survey<sup>109</sup>

<sup>&</sup>lt;sup>109</sup> The Orkney Coastal and Marine Recreational Survey. <a href="https://www.orkney.gov.uk/Service-Directory/D/marine-and-coastal-recreation-survey-report.htm">https://www.orkney.gov.uk/Service-Directory/D/marine-and-coastal-recreation-survey-report.htm</a>.



<sup>&</sup>lt;sup>106</sup> Evidence Statement – SD1712: The well-being and human health benefits of exposure to the marine and coastal environment. DEFRA. 2019.

https://randd.defra.gov.uk/ProjectDetails?ProjectID=20097&FromSearch=Y&Publisher=1&SearchText=SD1 712&SortString=ProjectCode&SortOrder=Asc&Paging=10

 $<sup>\</sup>underline{\text{https://www.smmr.org.uk/wp-content/uploads/2020/07/SD1712}} \ \ well-being-and-human-health-benefits.pdf$ 

The Orkney Core Paths Plan. Outdoor Access - Orkney Islands Council. https://oic.maps.arcgis.com/apps/MapSeries/index.html?appid=462f21e42d74428984b868be3a8c57c2

The Orkney Islands Marine Region: State of the Environment Assessment. 2020 <a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen</a> v2.pdf

### Sector Policy 7: Tourism, recreation, leisure and sport

## Sector Policy 7a: Tourism, recreation, leisure and sport development and/or activities

- i. Proposals for marine tourism, recreation, leisure and sport development and/or activities should avoid, minimise or appropriately mitigate significant adverse impacts on:
  - a. landscape and/or seascape character and visual amenity;
  - nature conservation designations, protected species, and the wider biodiversity, including Priority Marine Features;
  - c. seal haul-out sites;
  - d. water quality and the benthic environment;
  - e. historic environment assets;
  - f. coastal processes including those caused by erosion, flooding and wider coastal change;
  - g. other coastal and marine users including, but not limited to, commercial fishing, shipping and navigation, ports and harbour infrastructure/operations, aquaculture sites, tourism, recreation, and sport and leisure activities; and
  - h. amenity, including consideration of road traffic, noise, light, access, vibration and litter impacts.
- ii. Proposals for marine tourism, recreation, leisure and sport development and/or activities should follow relevant codes of best practice and guidance, including, but not limited to, the Marine Wildlife Watching Code, the Scottish Outdoor Access Code and biosecurity practices and marine litter/waste guidance.
- iii. To maximise the benefits from existing infrastructure, proposals for marine tourism, recreation, leisure and sport development and/or activities should demonstrate that they have considered the potential to utilise appropriate existing infrastructure and/or facilities, including shared use with complementary activities and sectors.

#### Sector Policy 7b: Safeguarding tourism, recreation, leisure and sport uses

- Proposals for development and/or activities should avoid, minimise or appropriately mitigate significant adverse impacts on tourism, recreation, leisure and sport uses.
- ii. Proposals for development and/or activities should demonstrate engagement and/or consultation with relevant tourism, recreation, leisure and sport bodies and/or users to ensure that the measures proposed to avoid, minimise and/or mitigate adverse impacts on tourism, recreation, sport and leisure uses are appropriate.

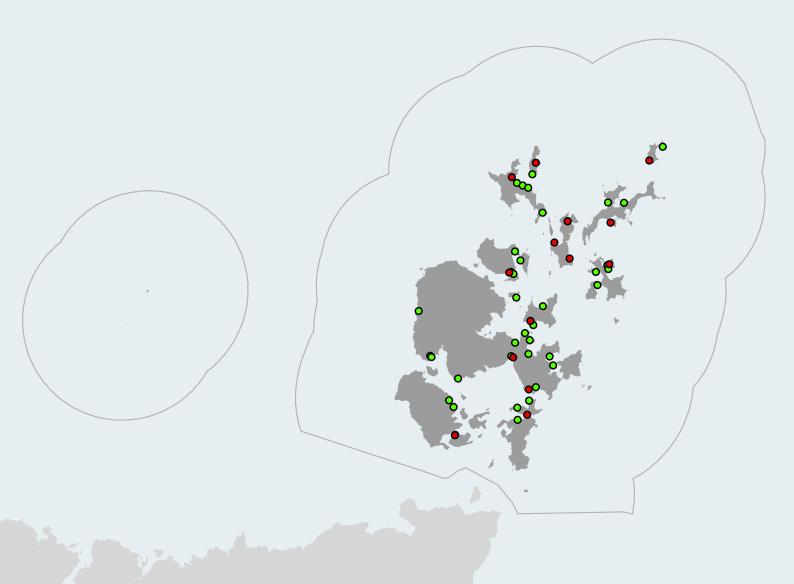
Table 24: Sector Policy 7 links to Plan objectives, state of the environment assessment and other plans

Contribution to Regional Marine Plan objectives	
Direct contribution to objectives:	1, 2, 6, 7
Indirect contribution to objectives:	5
Assessment of the condition of the Orkney Islands marine region	
Orkney Islands Marine Region: State of Section 6.9 the Environment Assessment baseline information	
Alignment with other marine and land-use plans	
National Marine Plan 2015	Chapter 12
National Planning Framework 4	Policy 20
Orkney's Regional Spatial Strategy (Indicative)	Strategic Priority: Sustainable Communities Strategic Priority: Thriving Economy Strategic Priority: An Outstanding Environment and Quality of Life
Orkney Local Development Plan 2017	Policy 10A

# Map 21: Clyde Cruising Club anchorages and Visiting Yacht Moorings

### Key

- Visiting Yacht Moorings (VYM)\*
  - Anchorages listed in the Clyde Cruising Club
- (CCC) Sailing Directions and Anchorages publication
- —— 12 nm boundary



\*Visiting Yacht Mourings are seasonal and only deployed May-October. Some VYMs may also be included in CCC anchorages. For more information on CCC anchorages please refer to the CCC 'Sailing Directions and Anchorages' publication.





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# Section 4: Monitoring, Evaluation and Review of the Plan

- 4.1 In accordance with the Marine (Scotland) Act 2010, the Plan will be subject to review every five years from the date of adoption and publication. The Plan will be kept under review with regards to the effects of the policies and their effectiveness in securing the Plan's objectives. This review process will be informed by monitoring and evaluation of the Plan's effectiveness using an appropriate framework and indicators.
- 4.2 This Plan includes a vision and an aim, guiding principles, objectives, and general and sector policies that support the delivery of sustainable development in the Orkney Islands marine region. It provides a policy framework to enable public authority decision makers to determine authorisation and enforcement decisions and make other decisions capable of affecting the marine environment. Decision making, compliance and enforcement are essential to the effective implementation of the Plan<sup>110</sup>, and these functions rely on the participation of regulating authorities, developers and other plan users.
- 4.3 When the Plan has been adopted, it will be necessary to analyse and assess the extent to which the Plan's vision, aim and objectives are being met. This process of monitoring and evaluation will require the identification of relevant indicators and the collection of associated data. There is an intention to develop a set of indicators once the Plan is published. The instructions created by the Maritime Spatial Planning Programme on evaluating marine spatial plans<sup>111</sup> will provide guidance to a stepwise approach to setting indicators for monitoring and evaluation purposes. The setting of criteria and indicators will be guided by the objectives of the Plan, and its process, and informed by the baseline provided by the Orkney Islands Marine Region: State of the Environment Assessment<sup>112</sup>.

Step 8. Implementing the plan – MSP GLOBAL 2030 <a href="https://www.mspglobal2030.org/resources/key-msp-references/step-by-step-approach/implementing-the-plan/">https://www.mspglobal2030.org/resources/key-msp-references/step-by-step-approach/implementing-the-plan/</a>

<sup>&</sup>lt;sup>111</sup> A Guide to Evaluating Marine Spatial Plans. Marine Spatial Planning Global. https://www.mspglobal2030.org/resources/key-msp-references/evaluating-marine-spatial-plans/

The Orkney Islands Marine Region: State of the Environment Assessment. 2020
<a href="https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen">https://www.orkney.gov.uk/Files/Planning/Development-and-Marine-Planning/20210107-OIC-Report-V9-screen</a> v2.pdf

# **Appendix 1**: Licensing and Consenting Decisions

- A1.1 Table A1 outlines licensing and consenting requirements, or authorisation and enforcement decisions, for marine development and activities. It is intended for guidance purposes only and does not provide an exhaustive list of all relevant licensing and consenting requirements and associated processes.
- A1.2 Public authorities are required to take any authorisation or enforcement decision in accordance with the appropriate regional marine plan, unless relevant considerations indicate otherwise. Table A1 identifies the key authorisation and/or enforcement decisions that implement the Plan policies. The key types of assessment that may be required to inform licence or consent applications are also identified.
- A1.3 Legislation, plans, strategies and policies relevant to marine development and activities are provided in Appendix 2, which is not exhaustive.

Table A1: Licensing and consenting for marine development or activities

Licence or consent type	Responsible body
Marine licence	Marine Directorate – Licensing Operations Team (MD-LOT)
CAR licence	Scottish Environment Protection Agency (SEPA)
Planning permission and related consents	Planning Authority (Orkney Islands Council for the Orkney Islands local authority area)
Works licence	Orkney Islands Council
Scheduled Monument Consent	Historic Environment Scotland (HES)
Licence to carry out prohibited works, operations, etc. on controlled sites	Ministry of Defence (MOD)
European Protected Species licence	NatureScot (Scottish Natural Heritage)/MD-LOT

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<sup>&</sup>lt;sup>113</sup> Marine (Scotland) Act 2010. https://www.gov.scot/publications/marine-scotland-act/



Licence or consent type	Responsible body
Seabed lease	Crown Estate Scotland (CES)
Section 36	MD-LOT
Electricity Act consent	
Related assessments that may be required for obtaining a licence or consent	
for development a	nd/or activities
Environmental	Planning Authority/MD-LOT/Department for Energy Security
Impact	and Net Zero.
Assessment (EIA)	
Habitats	MD-LOT/Planning Authority
Regulations	
Appraisal (HRA)	

Disclaimer Table A1 is intended for guidance purposes only and does not provide an exhaustive list of all relevant licensing and consenting requirements and associated processes.

For further guidance, refer to the Orkney Islands Council planning permission guidance notes for the submission of marine-related development applications<sup>114</sup> and Marine Directorate of the Scottish Government's Guidance for Marine Licence Applicants<sup>115</sup>.

It is strongly advised that applicants consult with the appropriate licensing or consenting authorities as early as possible to determine the appropriate licence or consent requirements and to identify key stakeholders (including other marine users) and their relevant responsibilities.

<sup>&</sup>lt;sup>115</sup> Marine environment: licensing and consenting requirements. Scottish Government. https://www.gov.scot/collections/marine-licensing-andconsent/?msclkid=66a52045b42311ec98a4b568b715bc95



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<sup>&</sup>lt;sup>114</sup> Aquaculture - planning applications information and guidance. Orkney Islands Council. https://www.orkney.gov.uk/Service-Directory/A/Aquaculture.htm?msclkid=45f56695b42311ec9b0a22d11ed0fe39

# **Appendix 2**: Relevant Legislation, Plans, Strategies and Policies

A2.1 Table A2 outlines the key legislation, plans, strategies and policies relevant to development, activities, and use in the Orkney marine region. It does not provide an exhaustive list of all relevant legislation, plans, strategies and policies.

Table A2: Relevant legislation, plans, strategies and policies

Legislation	
Marine and Coastal Access Act	Establishes the requirement for marine policy to be
2009	developed at the UK level.
Marine (Scotland) Act 2010	Establishes the requirement for a national marine
,	plan and provision for regional marine plans.
Scottish Marine Regions Order 2015	Establishes the Scottish Marine Regions boundaries.
Islands (Scotland) Act 2018	Establishes, among other things, that Orkney Islands Council can be a sole delegate for the functions relating to regional marine plans.
Town and Country Planning (Scotland) Act 1997 as amended by the Planning etc. (Scotland) Act 2006	The main planning law in Scotland is the Town and Country Planning Act (Scotland) 1997 as amended by The Planning etc. (Scotland) Act 2006. From 3 August 2009, the majority of the 2006 Act came into force.
The Conservation (Natural Habitats, &c.) Regulations 1994	European sites were originally designated under the 'Habitats Directive' and 'Birds Directive' but are now designated under this legislation.
Plan, strategy or policy	
UK Marine Policy Statement	Framework for preparing marine plans and taking
(2011)	decisions affecting the marine environment.
Scotland's National Marine Plan 2015	Sets out national objectives and policies to support sustainable development of Scotland's seas.
A Blue Economy Vision for	Sets out the long-term ambition for Scotland's blue
Scotland / Delivering Scotland's	economy to 2045. It demonstrates how much we
Blue Economy approach	value our marine environment and its significance. This is captured in six outcomes sitting across a range of environmental, social and economic ambitions.
Climate Change Plan	Sets out the Scottish Government's pathway to our new and ambitious targets set by the Climate Change Act 2019.
Scottish Marine Litter Strategy 2022	A strategy to develop measures to minimise the amount of litter entering the marine and coastal environment.

Plan, strategy or policy	
National Planning Framework	The National Planning Framework (NPF) is a longterm plan for Scotland that sets out where development and infrastructure is needed.
Historic Environment Policy for Scotland (HEPS) 2019	Outlines how a duty of care for our historic environment will come into existence whenever a decision will affect the historic environment.
Scottish Government and Scottish Green Party Shared Policy Programme	(Known as the Bute House agreement) Commits to cooperation and collaboration in decision-making.
Sectoral Marine Plan for Offshore Wind Energy 2020	Aims to identify sustainable plan options for the future development of commercial-scale offshore wind energy in Scotland, including deep-water wind technologies, and covers both Scottish inshore and offshore waters.
Draft Sectoral Marine Plans for Offshore Wind, Wave and Tidal Energy in Scottish Waters 2013	The Wave and Tidal elements of this plan are the current guidance for these types of development. The wind sectoral plan has been updated, as per the plan in the row above.
Orkney Local Development Plan 2017	Sets out a vision and spatial strategy for the development of land in Orkney over the next ten to twenty years. The plan contains the land-use planning policies which Orkney Islands Council will use for determining applications.
Aquaculture Code of Practice: Containment of and Prevention of Escape of Fish on Fish Farms in relation to Marine Mammal Interactions	Sets out standards expected from Aquaculture Production Businesses in Scotland in order to provide for the containment of fish on fish farms and to prevent their escape in relation to marine mammal interactions.
Orkney Local Biodiversity Action Plan 2018–2022	Action plan to support the conservation of biodiversity in Orkney, including marine habitats and species.
Orkney Harbours Masterplan – Phase 1 – Planning Policy Advice	Provides a structured framework for the physical development and transformation of Orkney's harbours over a 20-year period.

**Disclaimer:** Table A2 is intended for guidance purposes only and does not provide an exhaustive list of all relevant legislation, plans, strategies and policies, nor does it provide legal interpretation of legislation referred to therein.

The onus remains with the applicant to ensure that they comply with the relevant legal requirements.



## Appendix 3: National Marine Plan interactive

### **National Marine Plan interactive: User guide**

#### What is the National Marine Plan interactive?

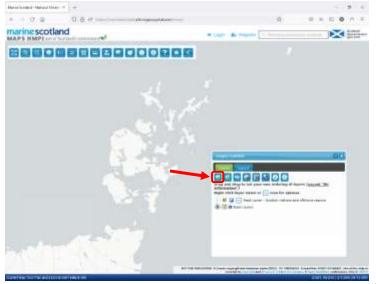
- A3.1 The National Marine Plan interactive (NMPi) is an online mapping tool developed by Marine Directorate of the Scottish Government to assist in the development and delivery of national and regional marine planning. It contains environmental, social and economic data for Scottish inshore waters (out to 12 nautical miles) and offshore waters (12–200 nautical miles).
- A3.2 NMPi is not a static system, and data sets, new statistics and other details are added when available. Users of the Orkney Islands Regional Marine Plan are encouraged to refer to NMPi for up-to-date spatial data and maps.

#### How do I access information on NMPi?

- A3.3 NMPi is accessed online at <a href="http://maps.marine.gov.scot/">http://maps.marine.gov.scot/</a> or via an internet search for 'NMPi Scotland'. Data can be viewed via the 'View layers to add/remove' button.
- A3.4 Layers can then be selected by navigating the folders or by searching for a keyword in the search bar (e.g. 'Marine Protected Areas'). To add the selected layers to the interactive map, select the layer(s) you wish to add and click the 'Add/Remove Layers' button.
- A3.4 Tick the layers that you want to view in the 'Layer Control' window, and they will appear on the map. You can now zoom in to view the spatial information in more detail, view the origin of the data under the context menu (-), or add more data layers by following the same process.

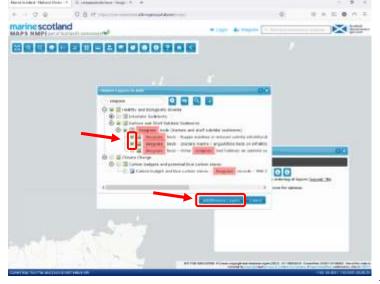


### **Example: Viewing seagrass locations**



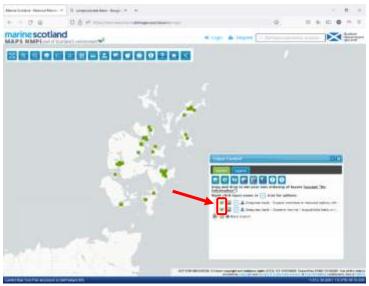
### Step 1

Click 'View layers to add/remove'.



### Step 2

Navigate the layer folders or search with a keyword in the search bar (e.g. 'Seagrass'). Tick the layers you would like to add and click 'Add/Remove Layers'.



### Step 3

Tick the layers you would like to view and they will be added to the map.

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# **Appendix 4**: Natural Capital and Marine Ecosystem Services

### **Natural Capital and Ecosystem Services**

- A4.1 Natural capital is the stock of renewable and non-renewable natural resources (e.g. plants, animals, air, water, soils and/or minerals) that combine to yield a flow of benefits to people that are often referred to as ecosystem services.
- A4.2 Ecosystem services are processes by which the environment produces resources that are utilised by humans, such as clean air, water, food, energy and materials. A well-functioning marine ecosystem supports these vital ecosystem services.
- A4.3 Ecosystem services deliver a variety of goods, such as food resources and services, and waste assimilation and treatment, which have value to human society above and beyond just maintaining ecosystem functioning<sup>116</sup>. A summary of the benefits of marine ecosystem services is shown in Figure A1<sup>117</sup>.
- A4.4 Benefits are the changes in human wellbeing or welfare that result from the consumption or use of goods and services or from knowing something exists. These benefits can be classified as:
  - *Provisioning services*: these create benefits through the provision of products from nature, such as food, water and raw materials.
  - Regulating services: benefits arise through the moderation of natural phenomena, for example sequestering carbon, removing pollutants from the air and regulating water flows.
  - Cultural services: non-material, experiential benefits provided through interaction with nature, for example recreation, tourism and aesthetic experiences.
  - Supporting services: cross-cutting services that underpin the production of all other ecosystem services, for example soil formation, nutrient cycling, provision of habitat and seed dispersal.

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Frid et al. (2011) The Ecosystem Approach to Marine Planning and Management: Chapter 4. (Eds: Kidd, Plater & Frid). Earthscan, London.

Natural capital, ecosystem services and the Blue Economy – Scotland's Marine Assessment. Marine Scotland. 2020. <a href="https://marine.gov.scot/sma/assessment-theme/natural-capital-ecosystem-services-and-blue-economy">https://marine.gov.scot/sma/assessment-theme/natural-capital-ecosystem-services-and-blue-economy</a>

https://marine.gov.scot/sma/assessment-theme/natural-capital-ecosystem-services-and-blue-economy

A4.5 The concepts of natural capital and ecosystem services have developed significantly over the past decade, gaining traction globally as a robust means of linking the underlying functioning and ecology of ecosystems to multiple benefits enjoyed by society. In 2021, the partial asset value of UK marine natural capital assets was £211 billion<sup>118</sup>. In 2018, the natural economy in Scotland contributed £29.1 billion gross value added to the Scottish economy (just over a fifth of its total).

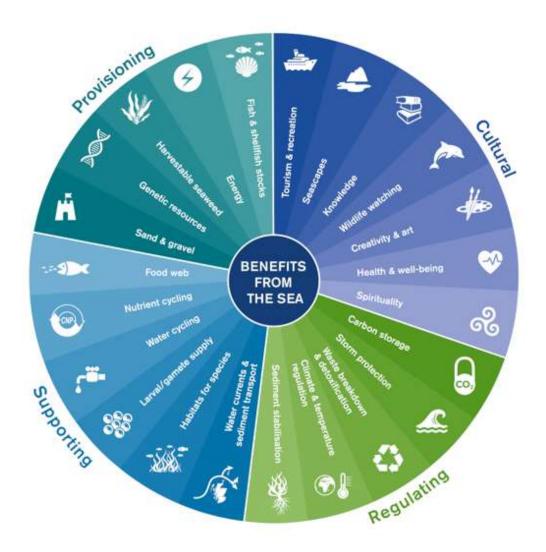


Figure A1: Examples of marine ecosystem benefits © NatureScot

Marine accounts, natural capital, UK. Office for National Statistics 2021.
<a href="https://www.beta.ons.gov.uk/economy/environmentalaccounts/bulletins/marineaccountsnaturalcapitaluk/2021">https://www.beta.ons.gov.uk/economy/environmentalaccounts/bulletins/marineaccountsnaturalcapitaluk/2021</a>

#### Oceans of Value

- A4.6 Oceans of Value is a project led by the Scottish Wildlife Trust that used a natural capital approach to assess key habitats and species within the Orkney Islands marine region<sup>119</sup>. The project was developed to investigate whether natural capital assessments could be applied to the marine environment at a Scottish marine region scale. This approach was the first of its kind and focused on the value of ecosystem services provided by the marine environment in Orkney.
- A4.7 The Oceans of Value Natural Capital Assessment of the Orkney Marine Region Area<sup>120</sup> provides a natural capital assessment and case study evaluations. This report provides a first-stage assessment of ecosystem services by habitat within the Orkney Islands marine region.

Oceans of Value. Scottish Wildlife Trust. <a href="https://scottishwildlifetrust.org.uk/our-work/our-projects/living-seas/oceans-of-value/">https://scottishwildlifetrust.org.uk/our-work/our-projects/living-seas/oceans-of-value/</a>



Oceans of Value. Scottish Wildlife Trust. https://scottishwildlifetrust.org.uk/our-work/our-projects/living-seas/oceans-of-value/

## **Appendix 5**: Priority Marine Features

### Table A3: Priority Marine Features in the Orkney Islands marine region

Broad habitat
1 Blue mussel beds
2 Flame shell beds
3 Horse mussel beds
4 Intertidal mudflats
4 Kelp and seaweed communities on sublittoral sediment
5 Kelp beds
6 Low or variable salinity habitats
7 Maerl beds
8 Native oysters
9 Seagrass beds
10 Tide-swept algal communities
11 Tide-swept coarse sands with burrowing bivalves
Low or limited mobility species
1 Northern feather star – <i>Leptometra celtica</i>
2 Fan mussel – Atrina fragilis
3 Ocean quahog – Arctica islandica
Mobile species
1 European spiny lobster – <i>Palinurus elephas</i>
2 European eel – <i>Anguilla anguilla</i> 3 Atlantic salmon – <i>Salmo salar</i>
4 Sea lamprey – Petromyzon marinus
5 Sea trout – Salmo trutta
6 Sparling – Osmerus eperlanus
7 Angler fish – Lophius piscatorius
8 Atlantic halibut – <i>Hippoglossus hippoglossus</i>
9 Atlantic herring – Clupea harengus
10 Atlantic mackerel – Scomber scombrus
11 Cod – Gadus morhua
12 Greenland halibut – Reinhardtius hippoglossoides
13 Horse mackerel – Trachurus trachurus
14 Ling – Molva molva
15 Norway pout – <i>Trisopterus esmarkii</i>
16 Round-nose grenadier – Coryphaenoides rupestris
17 Saithe – Pollachius virens
18 Sandeels – Ammodytes marinus and Ammodytes tobianus
19 Sand goby – Pomatoschistus minutus
20 Whiting – Merlangius merlangus
21 Basking shark – Cetorhinus maximus
22 Common skate – <i>Dipturus batis</i> complex
23 Porbeagle shark – Lamna nasus
24 Spiny dogfish – Squalus acanthias
25 Atlantic white-sided dolphin – Lagenorhynchus acutus
26 Bottlenose dolphin – Tursiops truncates



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Mobile species
27 Fin whale – Balaenoptera physalus
28 Harbour porpoise – Phocoena phocoena
29 Killer whale – Orcinus orca
30 Long-finned pilot whale – Globicephala melas
31 Minke whale – Balaenoptera acutorostrata
32 Northern bottlenose whale – Hyperoodon ampullatus
33 Risso's dolphin – <i>Grampus griseus</i>
34 Short-beaked common dolphin – Delphinus delphis
35 Sowerby's beaked whale – Mesoplodon bidens
36 Sperm whale – Physeter macrocephalus
37 White-beaked dolphin – Lagenorhynchus albirostris
38 Harbour seal – Phoca vitulina
39 Grey seal – Halichoerus grypus
40 Otter – Lutra lutra

### **Appendix 6**: Seaweed Harvesting

- A6.1 There is a growing interest in small-scale wild seaweed harvesting in Orkney. Hand harvesting of seaweed for any form of monetary or other reward from Crown foreshore or seabed in Scotland requires a licence from Crown Estate Scotland (CES). CES issues licenses for hand harvesting, as well as Foreshore Harvesting Options for larger-scale nearshore harvesting. Permission from the owner is always required whether wild seaweed is harvested from Crown or private foreshore.
- A6.2 At the time of writing this Plan, large-scale commercial seaweed harvesting does not take place in Orkney. A marine licence from Marine Directorate—Licensing Operations Team may be required to remove seaweed from the seabed using a vessel or vehicle.
- A6.3 Removals from the seabed by hand, that is where no vehicle or vessel is used do not require a marine licence. Within a Site of Special Scientific Interest (SSSI), consent may be required from NatureScot to harvest seaweed from the foreshore, depending on the Operations Requiring Consent for a given SSSI. At the time of writing, the sector is almost entirely based on harvesting of wild seaweed, predominately undertaken by small and micro-scale enterprises.<sup>122</sup>
- A6.4 The Scottish Crown Estate Act 2019<sup>123</sup> stipulates that the manager of a Scottish Crown Estate asset must not grant a right to remove wild kelp from the seabed in specific circumstances detailed in section 15 of the Act.

Wild kelp - restrictions on removal: questions and answers. Scottish Government. 2020. https://www.gov.scot/publications/wild-kelp---restrictions-on-removal-questions-and-answers/#:~:text=Hand%20removal%20of%20seaweed%20for,not%20require%20a%20marine%20licence



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https://www.crownestatescotland.com/what-we-do/marine/asset/aquaculture/Section/seaweed-harvesting

Potential scale of Scottish seaweed-based industries: research paper. Scottish Government. 2022. https://www.gov.scot/publications/understanding-potential-scale-seaweed-based-industries-scotland/

# **Appendix 7**: Definition of Key Concepts, Acronyms and Glossary

### Appendix 7a

**Table A4: Definition of key concepts** 

Term/phrase	Definition
Activity/activities	Any activity/activities that require authorisation from a public authority, e.g. 'licensable marine activities' identified under the Marine (Scotland) Act 2010 and activities licensed under the Water Environment (Controlled Activities) (Scotland) Regulations 2011.
Authorisation or enforcement decision	The determination of any application (whenever made) for authorisation of the doing of any act which affects or might affect the whole or any part of the Scottish marine area, as detailed and further expanded upon in the Marine (Scotland) Act 2010, section 15(4).
	Appendix 1 (which is not exhaustive), contains a summary of the relevant licensing and consent regimes, and associated processes, administered by public authorities to manage marine development and activities.
Biodiversity enhancement	Biodiversity enhancement is an approach to development and/or activities that aims to leave biodiversity in a measurably better state than beforehand. This means protecting, restoring, or creating environmental features that are of greater biodiversity value than any losses associated with the original development and/or activity.
Cumulative effect/impact	Additional changes caused by a proposed development in conjunction with other developments or the combined effect of a set of developments taken together.
Development	Any construction, building, engineering, mining, other operation and/or works that require authorisation from a public authority. This can include new development, or alterations, extensions or changes in material use to existing development or land.
Ecosystem- based approach	The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

Term/phrase	Definition
Guiding principles	A set of values that establishes a framework for expected behaviour and decision making.
Marine and/or coastal user(s)	Legitimate users of the marine and/or coastal environment for purposes such as, but not limited to, recreation, fishing, shipping, transport, energy generation, utilities and other economic and/or community activities.
Mitigation hierarchy	The mitigation hierarchy indicates the order in which the impacts of development and/or activities should be considered and addressed. These are:
	<ul> <li>i. avoid: by removing the impact at the outset;</li> <li>ii. minimise: by reducing the impact so that it is as low as practicable through the project design process;</li> <li>iii. mitigate: by taking measures to reduce and/or offset unavoidable adverse impacts.</li> </ul>
Nature-based solutions	Nature-based solutions are actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human wellbeing and biodiversity benefits.
Natural capital	Natural capital is the stock of renewable and non-renewable natural resources (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people, that are commonly referred to as ecosystem services. The UK Natural Capital Committee (2017) defines natural capital as: 'the elements of nature that directly or indirectly produce value to people, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions'.
Net zero	Scotland has set a target to become 'net zero' by 2045. This means that the amount of greenhouse gas emissions put into the atmosphere and the amount taken out will add up to zero.

Term/phrase	Definition
Precautionary principle	Defined in the UN Rio Declaration on Environment and Development 1992 as follows: 'Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.'
Positive effects for biodiversity	The development of land should contribute to securing positive effects for biodiversity, as detailed in the National Planning Framework, and this approach to planning is designed to help halt and reverse biodiversity loss and to invest in nature-based solutions, benefiting people and nature.
Sector	A sector is an area of the economy in which businesses share the same, or a related, business activity, product or service.
Sustainable development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Synergistic benefits	Benefits that occur when the sum of two effects together is greater than the sum of the effects separately.
Use	Any legitimate use of the marine and/or coastal environment that is exercised under a public right and that does not require authorisation from a public authority, e.g. freedom of navigation for shipping or the exercise of public access rights for the purposes of recreation.



### Appendix 7b

### **Table A5: Acronyms**

BAP	Biodiversity Action Plan	NNS	Non-Native Species
CES	Crown Estate Scotland	NPF4	National Planning Framework 4
EIA	Environmental Impact Assessment	OFA	Orkney Fisheries Association
GCR	Geological Conservation Review	OIC	Orkney Islands Council
HMPA	Historic Marine Protected Area	OLDP	Orkney Local Development Plan
IFG	Inshore Fisheries Group	OMPAG	Orkney Marine Planning Advisory Group
INNS	Invasive Non-Native Species	ORSS	Orkney Regional Spatial Strategy
LDP	Local Development Plan	OSF	Orkney Sustainable Fisheries
MARPOL	Marine Pollution (the International Convention for the Prevention of Pollution from Ships)	RMP	Regional Marine Plan
MPA	Marine Protected Area	SAC	Special Area of Conservation
NM	Nautical Miles	SEPA	Scottish Environment Protection Agency
NC MPA	Nature Conservation Marine Protected Area	SoEA	Orkney Islands Marine Region: State of the Environment Assessment
NMP	National Marine Plan	SPA	Special Protection Area
NMPi	National Marine Plan interactive	SSSI	Site of Special Scientific Interest

### Appendix 7c

### Table A6: Glossary

Adaptation	Adaptation refers to adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects or impacts.
Amenity	Amenity refers to the positive elements that contribute to the overall character and/or enjoyment of an area by residents, visitors and other users.
Benthic	Benthic refers to anything associated with or occurring on the bottom of a body of water.



Biodiversity	The variability in living organisms and the ecological complexes of which they are part. This includes diversity
	within species, between species and of ecosystems (UN Convention on Biological Diversity, 1992).
Carbon sequestration	The process of capturing and storing atmospheric carbon dioxide.
Co-creation	Engaging in an intentional relationship in order to make something together e.g. a mitigation measure.
Cultural heritage	An expression of the ways of living developed by a community and passed on from generation to generation. It can include customs, practices, places, objects, artistic expressions and values, and have aesthetic, historic, scientific, social or spiritual aspects.
Blue carbon	Carbon stored in marine habitats, e.g. maerl beds.
Coexistence	Development and/or activities that are located in the same place at the same time.
Community wealth building	A people-centred approach to local economic development, which redirects wealth back into the local economy, and places control and benefits into the hands of local people.
Compliance	The conformance to the requirements of the specific management actions of marine spatial plans by relevant ocean users.
Decarbonisation	Reducing the amount of gaseous carbon compounds released by buildings, activities or operations.
Developer	An entity that is taking forward a proposed development and/or activity.
Ecosystem services	The processes by which the environment produces resources utilised by humans, such as clean air, water, food, energy and materials.
Effect(s)	An effect is the result or outcome of an action.
Enhancement	Enhancement measures are those that actually improve the condition of the development site (or an alternative site) after the development or activity is complete.
Historic environment	The physical evidence for human activity that connects people with place, linked with the associations we can see, feel and understand.
Historic environment asset	A physical element of the historic environment, e.g. a building, monument, site, place, area or landscape, identified as having cultural significance.
Impact(s)	The influence of an action on something or someone.
Implementation	The process of using marine plans in decision-making or actions.
Just transition	Ending our contribution to climate change in a way that is fair and leaves no one behind
Mitigation	The act of reducing adverse effects or impacts.



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National development	National developments are developments of national
	importance identified in the National Planning Framework.
Quality of life	The standard of health, comfort and happiness
	experienced by an individual or group.
Resilience (climate)	The capacity of environmental, social and economic
	systems to cope with a hazardous event, trend or
	disturbance, responding or reorganising in ways that
	maintain their essential function, identity and structure,
	while also maintaining the capacity for adaptation, learning
	and transformation.
Special qualities	In relation to features of designated landscapes, e.g. NSA.
Sustainable	Development which meets the needs of the present,
development	without compromising the ability of future generations to
	meet their own needs.
Wellbeing	The state of being comfortable, healthy or happy.
Wellbeing economy	Building an economy that is inclusive and that promotes
	sustainability, prosperity and resilience, where businesses
	can thrive and innovate, and that supports all of our
	communities across Scotland to access opportunities that
	deliver local growth and wellbeing.
Wild Land Area	Wildness is a quality which people experience by a
	perceptual response. Wild land areas are the most
	extensive areas where these qualities are best expressed.



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