

# **Manx Marine Environmental Assessment**

## **Non-Technical Summary**

A Cross-Government Project supported by the Department of Infrastructure, Department for Enterprise and the Department of Environment, Food and Agriculture.



**Isle of Man  
Government**

*Reillys Eilan Vannin*

## Introduction

The Manx Marine Environmental Assessment has been undertaken to bring together information currently available for Manx Territorial Waters and a multi-disciplinary technical report has been prepared. The technical report is not a policy document but a statement of known information.

This non-technical summary provides an overview of the information compiled in the technical documents released for public consultation, during which anyone with an interest in the Manx marine environment had the opportunity to review the draft documents, identify gaps and highlight areas where work may be commissioned in future.

The original documents have since been updated in 2018 with the production on a Second Edition. This did not go out for public consultation, relevant experts were sort to provide updates to each of the chapters.

To view the current technical documents please see:

<https://www.gov.im/about-the-government/departments/infrastructure/harbours-information/territorial-seas/manx-marine-environmental-assessment/>

## Isle of Man Government Priorities

There may be opportunities for future coastal and offshore developments in Manx territorial waters to assist the Government to deliver its priorities of pursuing economic growth and diversifying the Manx economy whilst maintaining the quality of the environment. The sustainable management of our marine environment is expected to play an increasingly important role.

### Government priorities:

<b>An Island of enterprise and opportunity</b>
<b>Financially responsible government</b>
<b>An inclusive and caring society</b>

For more information please see:

<https://www.gov.im/about-the-government/government/the-council-of-ministers/programme-for-government/>

## The Approach

### Project Aims

The technical report aims to:

- Provide an overview of the current Manx marine environment including physical environment, habitats and species, industry and infrastructure;
- Provide an assessment of the current uses of the Manx territorial waters;
- Identify gaps in our current knowledge;

### Topics covered

The MMEA report covers a wide variety of topics with over 800 pages of technical content across 23 chapters. To make the report more manageable and easily digestible, the report has been split into 7 themes which break-down as follows:

<b>Introduction</b>	Project background, Legislation
<b>Physical Environment</b>	Hydrology, Weather & climate, Coastal Geology, Climate change, Marine Pollution.
<b>Ecology/ Biodiversity</b>	Species & habitats. Marine and Coastal Conservation (site designations & species protection).
<b>Fisheries</b>	Commercial fisheries and sea angling.
<b>Historic Environment</b>	Historic & cultural heritage.
<b>Infrastructure</b>	Shipping & navigation, Cables & pipelines, Energy and minerals.
<b>Tourism, Recreation and Education</b>	Activities, facilities, events and opportunities.

*NB: Not a comprehensive list.*

A **Non-Technical Summary** document has also been compiled as an overview document.

A **Table of Contents** document is also included.

### Key Facts and Findings:

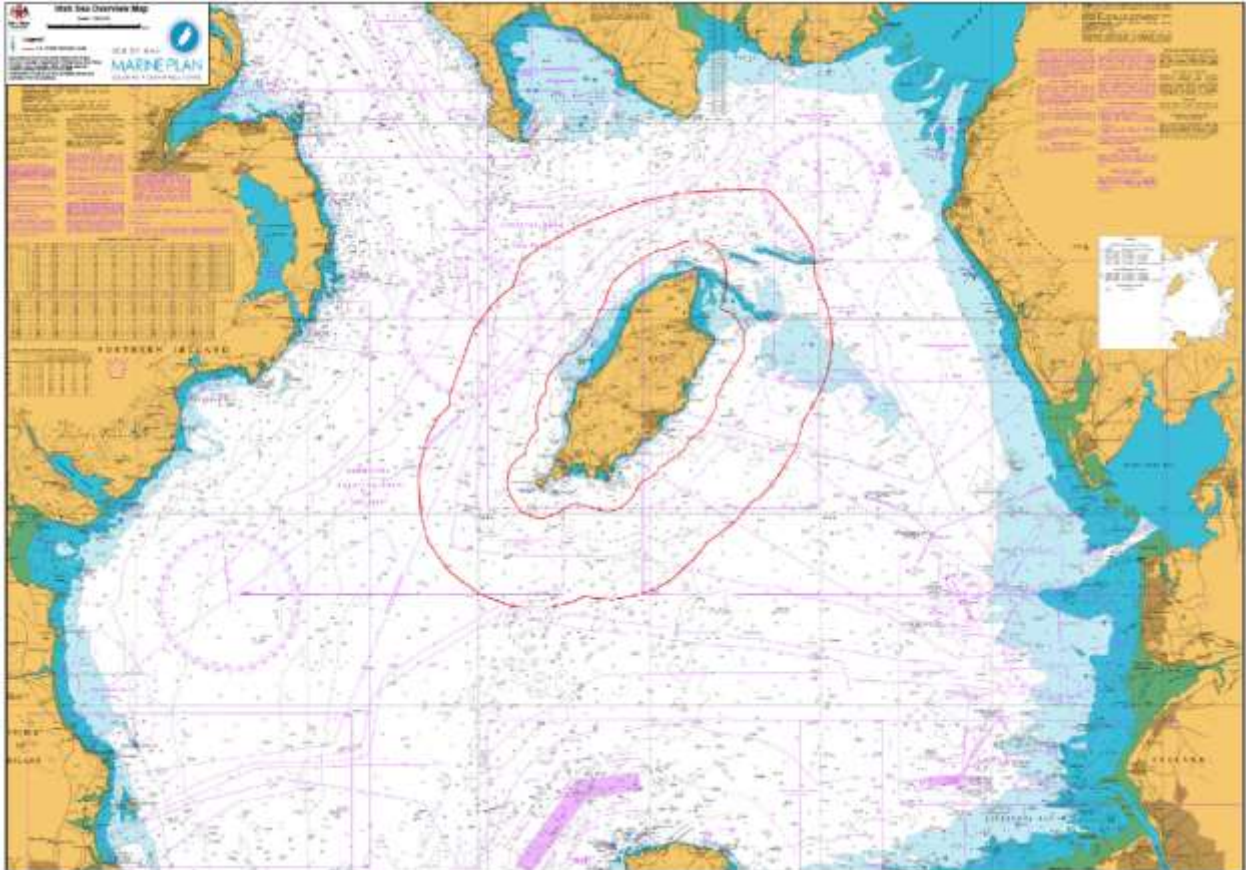
A summary of key facts and findings is included as an Appendix to this non-technical summary document.

# Manx Marine Environmental Assessment Non-Technical Summary

## Study Area

The Isle of Man has a relatively small land area (572 km<sup>2</sup> / 221 sq. miles) but has a central location in the Irish Sea with Manx territorial waters (3970 km<sup>2</sup>) accounting for greater than 87% of the Manx territory.

The Island has jurisdiction over its territorial waters to 12 nautical miles (12 nm) or the median line offshore, with ownership of all petroleum, gas and all minerals including coal.



### **The Isle of Man and its territorial waters in the context of the wider Irish Sea.**

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## Contributors

The technical report draws on established science together with a range of other local and broader Irish Sea resources and publications. A wide range of contributors worked on the 1<sup>st</sup> edition to compile the information and many contributors have worked in a volunteer capacity or outside their usual work remit. This second edition followed a similar format, updating the original chapters, and a revised contributor list is provided as an appendix to the full technical document.

### Key contributors:

<b>Isle of Man Government Departments</b>
<b>Other Isle of Man Statutory Bodies</b>
<b>Marine Industry Representatives</b>
<b>Private Sector</b>
<b>Non Governmental Organisations</b>
<b>Academic Institutions</b>
<b>Forums</b>
<b>Marine Users</b>
<b>Local Marine Scientists</b>
<b>Independent</b>

## Information Gathering and Marine Mapping

Several marine datasets have been created from new and existing sources of information. Where possible local data has been mapped using GIS (geographic information systems).

## Project Scope

- The Manx Marine Environmental Assessment is neither a policy nor legislative document.
- There are gaps in our knowledge of the Manx marine environment. The study area is extensive (approximately 3970 km<sup>2</sup>) and there are limitations to the information available on certain topics and locations. It is to be expected that more, potentially-significant information will become available over time, which will be included in subsequent revisions of the MMEA report.
- With renewable energy becoming increasingly important this information provides a baseline from which to build a robust Environmental Impact Assessment.
- More recently there has been the establishment of a centralised location for the collection, management and storage of marine data and resources through the Isle of Man Atlas. However, much of the information contained in the technical documents has been compiled from a number of sources.
- All components of the MMEA are expected to be reviewed on a regular, but infrequent basis, although without the formal public consultation process associated with the first edition. The project group would therefore continue to welcome new information or comments that will improve this document over time.

# Manx Marine Environmental Assessment Non-Technical Summary

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## Consultation Process

This Non-Technical Summary Document and the full Manx Marine Environmental Assessment technical report, is available online at: <https://www.gov.im/about-the-government/departments/infrastructure/harbours-information/territorial-seas/manx-marine-environmental-assessment/>

## Next Steps

This second edition of the MMEA Technical Report and supporting documents was completed in October 2018.

Future reviews of the documents will be undertaken at regular intervals to maintain currency of the information. It is envisaged that this will be an approximately multi-annual process, but with critical changes being made as necessary.

A primary function of the project is to maintain, enhance and validate the emerging marine evidence base.

## Further Information

This document and each of the technical documents for consultation are available to downloadable from the Isle of Man Government website at: <https://www.gov.im/about-the-government/departments/infrastructure/harbours-information/territorial-seas/manx-marine-environmental-assessment/>

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## Second Edition: October 2018

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Manx Marine Environmental Assessment – 2<sup>nd</sup> Ed. October 2018.

## Manx Marine Environmental Assessment Non-Technical Summary

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This document was originally produced as part of the, now abandoned, Isle of Man Marine Plan Project, a cross Government Department project funded and facilitated by the Department of Infrastructure, Department for Enterprise and Department of Environment, Food and Agriculture.

### **Suggested Citation for the Second Edition of the MMEA**

Duncan P.F. and Howe V.L. (*eds.*) 2018. Manx Marine Environmental Assessment. Second Edition. Department of Environment, Food and Agriculture, Isle of Man Government.

### **Disclaimer:**

The Isle of Man Government has facilitated the compilation of this document, to provide baseline information on the Manx marine environment. Information has been provided by various Government Officers, marine experts, local organisations and industry, often in a voluntary capacity or outside their usual work remit. Advice should always be sought from relevant contacts where queries arise.

The editors have taken every care to ensure the accuracy of the information contained but accept that errors and omissions may be present. The editors accept no responsibility for the accuracy or currency of information provided on external sites.

All MMEA chapters may be amended and improved upon in light of new information or comments received. As such, all chapters should be considered as working documents. Any initial guidelines or recommendations within the document are provided to help facilitate future discussions between stakeholders, Government Departments, future developers and the general public, and should be read only in the context of the document as a whole. This document does not provide legal or policy advice but rather a statement of known information about Manx territorial waters.

The mapping detail contained in this document is subject to the limitations of scale and depiction of any feature, does not denote or infer right of way and no claim is made for the definitive nature of any feature shown on the mapping. New marine datasets created for the project have not been subject to formal verification.

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# APPENDIX - Key Facts & Findings

<p><b>Introduction</b> Project Background Island Context Legislation</p>	<p>The background to the project is provided with an Island context and a summary of relevant legislation. A few key facts include:</p> <ul style="list-style-type: none"><li>- The Isle of Man is a self-governing British Crown Dependency with a distinct constitutional position within the British Isles. It has an entirely separate legal, political and tax system from that in the United Kingdom.</li><li>- The Island is 355 km<sup>2</sup> (221 square miles); 53 km (33 miles) long by 21km (13 miles) wide and home to a population of 83,314 (2016 census).</li><li>- The Department of Infrastructure has a similar role to that of the UK Crown Estate as the owner of the seabed from mean high water mark out to the 12 nautical mile Territorial Limit (except where the distance between the Isle of Man and adjacent territories is less than 24 nautical miles, where the limit will be the median line).</li></ul>
<p><b>Physical Environment</b> Hydrology Geology Marine Processes Weather &amp; Climate Climatology Climate Change</p>	<p>Elements of the physical marine and coastal environment are presented. A few key facts include:</p> <ul style="list-style-type: none"><li>- Water depth around the Isle of Man is deepest in waters to the west and southwest of the Island.</li><li>- Daily sea surface temperature (SST) readings have been recorded from Port Erin Bay since January 1904. Lowest temperature recorded was 6°C and highest was 16°C.</li><li>- Winters are generally mild and wet, and snowfall and frost are infrequent.</li><li>- Ronaldsway Meteorological Office is the National Meteorological Service (NMS) for the Isle of Man. A continuous weather record has been maintained since 1946.</li><li>- Climate driven change is apparent in Manx waters and increasingly stretches of the Isle of Man coastline are exposed.</li><li>- The chapter does not only deal with water quality but also heavy metal, radiation, organics etc. measured from sediment/biota and not just from water. Many of the key graphs presented show reductions in marine pollution in the long term and 'good' comparative status compared to wider Irish Sea.</li></ul> <p>For offshore waters the reader is directed towards two broadscale reports by the British Geological Survey for Manx waters and the wider Irish Sea.</p>



<p><b>Ecology/ Biodiversity</b>  Coastal Ecology  Plankton Ecology  Subtidal Ecology</p>	<p>A summary of Marine and Coastal Ecology is presented. A few key facts include:</p> <ul style="list-style-type: none"> <li>- Wave exposure is predominantly the most important factor to influence plant and animal distributions at the coast.</li> <li>- Underwater there are a wide range of sub-tidal biotopes in Manx waters including: <ul style="list-style-type: none"> <li>• Extensive horse mussel (<i>Modiolus modiolus</i>) reefs off the Point of Ayre, south of Douglas, off Jurby and to the south of Langness.</li> <li>• Maerl beds in coastal waters around the Island, particularly to the East</li> <li>• Eelgrass beds (<i>Zostera</i> sp.) in Ramsey Bay, Laxey Bay and off Langness</li> <li>• <i>Sabellaria spinulosa</i> habitat in southern Manx waters.</li> </ul> </li> </ul> <p>A systematic benthic survey of Manx waters in 2008 by Bangor University gathered a large amount of information about underwater habitats, including categorisation of biotopes using EUNIS categories.</p> <p>A very substantial body of work on coastal communities exists in the scientific literature, predominantly resulting from activities of the Liverpool University Port Erin Marine Laboratory which closed in 2006.</p> <p>Marine sites that are afforded protection for fisheries and conservation purposes are identified including the network of Closed Areas and Restricted Areas for Fisheries and the Ramsey Marine Nature Reserve.</p>
<p><b>Ecology/ Biodiversity</b>  Protected Species</p>	<p>The Manx marine environment is important for nationally and internationally recognised populations of seabirds and marine mammals. A few key facts include:</p> <ul style="list-style-type: none"> <li>- The Calf of Man is an important haul-out and pupping site for grey seals;</li> <li>- Harbour porpoise are the most commonly sighted cetacean species in Manx waters while Risso's dolphins are regular visitors.</li> <li>- Important nesting sites for Arctic Tern and Little Tern are found around the north-west coast of the Island.</li> <li>- The Isle of Man is an internationally recognised hotspot for basking sharks, which frequent the waters to the south and west of the Island usually between June and August each year. Recent tagging studies in Manx waters have shown that these basking sharks are also using the wider Irish Sea.</li> </ul>

<p><b>Commercial Fisheries &amp; Sea Angling</b></p>	<p>The Isle of Man promotes itself on its achievements towards sustainable fisheries management, with close collaboration and shared local knowledge benefitting both fisheries management and marine conservation initiatives. A few key facts include:</p> <ul style="list-style-type: none"> <li>- The Manx fishing industry currently supports approximately 400 jobs and generates an approximate direct turnover of £12 million per annum.</li> <li>- King scallop, queen scallop, lobster, brown crab and whelk are the most commercially important species and are distributed throughout Manx waters. Other notable commercial species include: <i>Nephrops</i>; Mackerel; herring.</li> <li>- The Island was one of the first places in the world to have a successful Marine Protected Area for fisheries purposes, the closed area established off Port Erin in 1989. In 2018 the existing marine protected areas were designated as marine nature reserves, bringing the total to 10, and encompassing over 430 km<sup>2</sup>, or 51.84% of the 0-3 M area.</li> <li>- Sea angling is a notable recreational activity on the Island and although many anglers and visitors are not affiliated to an angling club, they often fish on an <i>ad hoc</i> basis.</li> <li>- Aquaculture is represented by hatcheries for salmonids, (salmon and rainbow trout), although there are no current mariculture operations on the Isle of Man. Historically, significant finfish facilities and trials have been conducted.</li> </ul>
<p><b>Marine &amp; Coastal Conservation and Designated Areas</b></p>	<p>This chapter provides an overview of sites and areas on the Island and in Manx waters that have been designated for their unique and notable biodiversity (wildlife, birdlife, plantlife) or geological diversity. A few key facts include:</p> <ul style="list-style-type: none"> <li>- Several areas have received international recognition as important areas, despite sites having been selected via an Island-based approach due to their importance to the nation.</li> <li>- Statutory Designated areas include: Areas of Special Scientific Interest (ASSI); Bird Sanctuaries; Areas of Special Protection; National Nature Reserve; Marine Nature Reserves; Ramsar Site.</li> <li>- A summary of land in ownership by Manx National Heritage is provided as this also provides for the protection of places 'of natural interest or beauty' and places of historic interest.</li> <li>- A number of coastal areas were identified in a review of potential Ramsar sites (wetlands of international importance which can include sea areas to a depth of 6 metres).</li> </ul>

<p><b>Historic Environment</b></p>	<p>As an Island nation, Manx history is inextricably linked with the sea with a rich historic and archaeological record. A few key facts include:</p> <ul style="list-style-type: none"> <li>- There is a range of maritime (including seafaring) remains, features associated with coastal settlement, as well as remains of former terrestrial landscapes and their inhabitants.</li> <li>- The Island has a strong fishing history and lies on important trade and military routes. These factors combined with the often treacherous nature of the Manx coastal waters mean there are numerous shipwrecks.</li> <li>- The Manx National Heritage National Monuments Record contains over 5,000 records and a significant number of these are in coastal locations.</li> </ul>
<p><b>Infrastructure</b> Cables &amp; Pipelines</p>	<p>This chapter outlines the existing submarine infrastructure, including gas pipelines, power and telecommunications cables, with their connectivity, where relevant to the existing infrastructure network on the Isle of Man. A few key facts include:</p> <ul style="list-style-type: none"> <li>- Two gas-interconnector pipelines between Scotland and Ireland pass close to the west coast of the Isle of Man. From one of these interconnector pipelines (IC2) there is a spur pipeline with a landfall at Glen Mooar.</li> <li>- The electrical interconnector to the UK is owned by the Manx Cable Company, a wholly owned subsidiary of the Manx Electricity Authority (MEA).</li> <li>- The subsea section of the gas spur connecting IC2 to the Isle of Man is owned by BGE (IOM). Ownership transfers to the MEA on land.</li> </ul>

<p><b>Infrastructure</b> Shipping and Navigation</p>	<p>A summary of Shipping and Navigation in Manx waters is presented. A few key facts include:</p> <ul style="list-style-type: none"> <li>- It is essential for the Isle of Man that direct routes between the Island, England, Northern Ireland and Ireland be preserved. Ferry services are very important as they are a lifeline for the Isle of Man. They are required for the transport of passengers, food and other essential materials. Ferry services are an essential element of tourism and leisure development.</li> <li>- The Isle of Man does not have a marine defence capability which is instead provided by the UK.</li> <li>- Isle of Man harbours are used by over 2,000 registered pleasure craft that are based in the Isle of Man in addition to visiting pleasure craft.</li> <li>- Marine engineering and repair services are available on the Island for both the commercial and leisure sectors.</li> </ul>
<p><b>Infrastructure</b> Aviation</p>	<ul style="list-style-type: none"> <li>- Aviation provides essential links for the Isle of Man. The Isle of Man Airport comes under the 'wings' of the United Kingdom, which is answerable, under International aviation law for performance against International Civil Aviation Organisation (ICAO) standards.</li> </ul>
<p><b>Infrastructure</b> Energy, Mines, Minerals &amp; Renewables</p>	<p>This section discusses past and future development of marine renewable energy, hydrocarbon and aggregate extraction. A few key facts include:</p> <ul style="list-style-type: none"> <li>- Rights for hydrocarbons and minerals are vested in the Department of Economic Development.</li> <li>- Currently, the Isle of Man is heavily reliant on imported primary energy supplies derived from fossil fuels that have a finite supply. The Island is entirely dependent on external markets and all energy supplies of gas and oil are imported from the UK, Europe and beyond.</li> <li>- Previous commissioned reports indicate that there are a range of renewable energy technologies that may be applicable in Manx waters.</li> </ul>

**Tourism/ Leisure/ Education**

A brief introduction of current tourism, recreation and education activities is presented with a summary of relevant resources and contacts for obtaining further information. A few key items of note include:

- Wildlife watching occurs all around the Manx coastline and via vessel at sea, including commercial charter boats.
- There are a number of recognised RYA (Royal Yachting Association) clubs and sailing schools. Sea swimming, snorkelling, kayaking, kite surfing and jet skiing are increasingly popular water-based activities. Surfing is reliant on sea conditions and several key locations have been identified.
- Manx waters provide great opportunities for scuba diving and there are commercial operators.
- Although some watersport activities may be localised, Manx marine users value the freedom of access to most areas around the coastline.

